

*Appl Sci
collection*

ANNUAL REPORT
OF THE
DEPARTMENT OF AGRICULTURE
OF THE
PROVINCE OF ALBERTA
FOR THE YEAR
1954



—
PUBLISHED BY ORDER OF THE LEGISLATIVE ASSEMBLY
—

EDMONTON:
PRINTED BY A. SHNITKA, QUEEN'S PRINTER
1955

S
135
A33
1954

SCI

Ex LIBRIS
UNIVERSITATIS
ALBERTAENSIS



Agr. 5
135
A33
1954

ANNUAL REPORT

OF THE

DEPARTMENT OF AGRICULTURE

OF THE

PROVINCE OF ALBERTA

FOR THE YEAR

1954



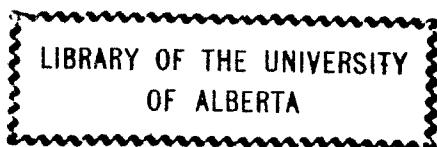
PUBLISHED BY ORDER OF THE LEGISLATIVE ASSEMBLY

EDMONTON:
PRINTED BY A. SHNITKA, QUEEN'S PRINTER
1955



TABLE OF CONTENTS

	Page
Report of the Deputy Minister	5
Report of the Field Crops Branch	7
Report of the Live Stock Branch	33
Report of the Dairy Branch	54
Report of the Poultry Branch	71
Report of the Apiculture Branch	75
Report of the Fur Farm Branch	80
Report of the Water Resources Branch	84
Report of the Agricultural Extension Service	90
Report of the Veterinary Service Branch	120
Report of the Schools of Agriculture	138
(a) Olds School of Agriculture	140
(b) Vermilion School of Agriculture	145
(c) Fairview School of Agriculture	149
4-H Clubs	154
Report of the Radio and Information Branch	162
Report of the Provincial Horticultural Station	165
Report of the Surplus Wheat Board Monies Trust	171



To His Honour,

J. J. BOWLEN,

Lieutenant-Governor of the Province of Alberta.

Sir:

I have the honour to submit herewith the Report of the Department of Agriculture for the year 1954.

I have the honour to be, Sir,

Your obedient servant,

L. C. HALMRAST,

Minister of Agriculture.

163401

DEPARTMENT OF AGRICULTURE 1954

HON. L. C. HALMRAST, Minister of Agriculture

O. S. LONGMAN, Deputy Minister of Agriculture

HEADS OF BRANCHES

A. M. Wilson, Field Crops Commissioner.

W. H. T. Mead, Live Stock Commissioner.

D. H. McCallum, Dairy Commissioner.

R. H. McMillan, Poultry Commissioner.

W. G. leMaistre, Provincial Apiarist.

J. Kokolsky, Fur Farm Supervisor.

F. L. Grindley, Director of Water Resources.

F. H. Newcombe, Director, Extension Service.

E. E. Ballantyne, V.S., D.V.M., Director, Veterinary Services.

R. M. Putnam, Superintendent, Schools of Agriculture and Assistant Deputy Minister.

J. E. Birdsall, Principal, Olds School of Agriculture.

N. N. Bentley, Principal, Vermilion School of Agriculture.

J. E. Hawker, Principal, Fairview School of Agriculture.

G. S. Black, Supervisor, 4-H Clubs.

E. R. McCrimmon, Supervisor, Radio and Information Branch.

P. D. Hargrave, Superintendent, Horticultural Station.

Report of the Deputy Minister

(O. S. Longman)

The Honourable L. C. Halmrast,
Minister of Agriculture.

Sir:

I have the honour to submit herewith for your consideration the forty-eighth Annual Report of the Department of Agriculture for the year ending December 31st, 1954.

Within the report you will find a detailed review of the past year's activities of eleven Branches of the Department and in addition the statutory report of the Surplus Wheat Board Monies Trust.

During the year progress has been made in integrating the Water Resources Branch with the Department in accordance with your instructions. The report of this Branch is included in this report for the first time.

The preliminary cash income of Alberta in 1954 was \$394,102,000 compared with \$491,529,000 in 1953. Following three years of above normal agricultural production, the year 1954 proved to be one of disappointment for many farmers, particularly those located throughout the central region of the Province. It was one of the wettest years on record. The provincial yield of cereals was below average. Pastures were excellent due to excessive rain. Low yields and the inability of farmers to market grain carried over from the 1953 crop, created considerable distress, so much so that in certain Municipal Districts the powers of The Agricultural Relief Advances Act were implemented to provide necessitous farmers with feed and seed for the coming year.

As a result of abnormal precipitation during 1952 and 1953, and excessive rainfall in 1954, lake levels attained dangerous heights, rivers flooded and much damage due to flooding and erosion occurred throughout the Province. The destructiveness of the excessive rainfall was accentuated by the increased area of land in water sheds being denuded of forest cover and being brought under cultivation. This condition was further aggravated by the diversion of surface run-off due to the construction of new highways. The effects of this situation upon agriculture will require a closer study and coordination of agencies responsible for agricultural development; the control of water resources; forestation and highway construction.

During the year the undersigned acted as Chairman of two committees that submitted reports to Departments of Government. The reports in questions are:— "A Preliminary Report on The Special Areas of Alberta" addressed to the Honourable C. E. Gerhart, Minister of Municipal Affairs; and "Report of the Agricultural Coordinating Committee on Soil Classification, Surveys and Research" requested by the late Honourable Dr. J. L. Robinson,

Minister of Industries and Labour and Chairman of the Research Council of Alberta, but submitted to the Honourable G. E. Taylor, Minister of Highways and present Chairman of the Alberta Research Council.

The present staff of the Department of Agriculture consists of 366, including the Water Resources Branch, classified as 176 technical and 190 non-technical.

During the year the following promotions, retirements and resignations affecting the permanent staff have taken place:

Promotions:

A. E. Edwards appointed District Agriculturist at Sedgewick
 W. L. McNary appointed District Agriculturist at Sangudo
 R. C. Moffat appointed District Agriculturist at Grande Prairie
 P. Mewha appointed Assistant Supervisor of 4-H Clubs (Home Projects)
 R. H. McMillan appointed Poultry Commissioner
 F. L. Grindley appointed Director of Water Resources
 N. M. Sutherland appointed Chief Engineer, Water Resources

Retirements:

F. J. Higginson, Poultry Commissioner
 W. L. Mundy, Fieldman, Farm Labour
 E. R. Nicholls, Poultry Inspector
 B. Russell, Director of Water Resources

Resignations:

E. A. Chisholm, District Agriculturist, Rocky Mountain House
 M. K. Fraser, Supervisor, Girls' Clubs
 S. I. Holms, District Home Economist, Wainwright
 J. Kokolsky, Fur Farm Supervisor
 K. E. May, Instructor, Olds School of Agriculture
 A. O. Mickelson, Poultry Inspector
 W. A. Moisey, District Agriculturist, Camrose
 Mrs. C. M. Moore, Extension Home Designer
 H. V. Moseson, Instructress, Olds School of Agriculture
 L. H. Peacock, District Agriculturist, Sangudo
 W. J. Perkins, District Agriculturist, Hanna
 J. Raffa, Poultry Inspector
 J. T. Stranotka, District Agriculturist, Grande Prairie
 A. S. Underhill, Senior Irrigation Engineer

At this time I wish to express my sincere appreciation for the service and loyalty of the staff in the implementation of the programs and policies of the Department during the year. Particularly do we appreciate the assistance rendered during the year by officials of the Federal Department of Agriculture, the Faculty of Agriculture of the University, Municipal Councils, Service Boards, Chambers of Commerce, Advisory Committees and all others who have given freely of their time and service.

Respectfully submitted,

O. S. LONGMAN,
 Deputy Minister.

Report of the Field Crops Branch

A. M. WILSON, Commissioner

R. L. Pharis, Crop Improvement

P. D. McCalla, Horticulture

G. R. Sterling, Soil Conservation and Weed Control

W. Lobay, Crop Protection

GENERAL

The crop year of 1954 was one of exceptions. After three years of above average rainfall the expected dry year instead became one of the wetter years on record. Throughout west-central Alberta rain which started in early spring continued into late summer. Cool cloudy weather prevailed during the greater part of the growing season. Crops matured slowly and on September 16th and 19th severe frosts occurred all over the province with the exception of the south-eastern part.

The Spring was backward and practically no seeding was done in April. By the end of May, much of the intended wheat acreage in central Alberta still remained unseeded. By late June many farmers were still attempting to get coarse grain planted.

The Western areas suffered greatest crop losses. From Olds north to Athabasca and to a lesser degree as far east as Vegreville crops generally were either severely damaged or of low quality.

The heavy rains of late August falling on saturated land, flooded low lying fields. Harvest was delayed because farm machinery could not be used on the water soaked land. After the frost and snow of late September the weather cleared and farmers salvaged all possible crop under ideal harvest conditions.

In early June strong south-east winds blew rust spores over western Canada. Initial infection was reported in early July at Vermilion and shortly after in southern Alberta. The dull weather was ideal for the development of rust. The north-eastern part of Alberta, from Lloydminster to St. Paul, suffered greatest damage. Garnet and Red Bobs wheat were ruined in some districts and Thatcher yields were considerably reduced because the predominant race of rust was 15 b.

In spite of adverse conditions farmers harvested a crop only slightly below average in yield although of inferior quality due to frost. The following table compares the production of 1954 crops with the previous year.

Estimated Acreage, Yield and Production of Principal Crops for 1953 and 1954

Crop	Area Seeded		Yield per acre		Production	
	1953	1954	1953	1954	1953	1954
		acres		bushels		bushels
Wheat	6,340,000	5,862,000	25.7	16.2	163,000,000	95,000,000
Oats	2,357,000	2,354,000	47.5	31.4	112,000,000	74,000,000
Barley	3,489,000	3,053,000	31.0	22.9	108,000,000	70,000,000
Fall Rye	328,000	181,000	22.9	19.5	7,500,000	3,525,000
Spring Rye	132,000	34,300	16.7	13.8	2,200,000	475,000
All Rye	460,000	215,300	21.1	18.6	9,700,000	4,000,000
Mixed Grains	80,000	120,000	35.0	25.7	2,821,000	3,034,000
Peas (dry)	7,000	8,300	14.3	17.4	100,000	144,000
Potatoes	15,400	15,400	179.0	123.0	2,757,000	1,894,000
Flaxseed	164,000	215,000	12.2	10.0	2,000,000	2,150,000
				tons		tons
Tame Hay	1,300,000	1,343,000	2.00	1.49	2,000,000	2,000,000

Seed supplies for planting the 1955 crop appeared to be adequate although seed of coarse grains had to be moved into deficient areas. The carry over of oats and barley from the 1953 crop which was of good quality played a very important part in supplementing seed of poor germination from 1954 production in central Alberta.

To assure farmers of adequate seed, storage bins to hold 100,000 bushels were erected at Municipal and Private Cleaning Plants. Peace River oats were shipped for cleaning and storage at central points.

Because of unseeded acreage low yields and frozen crops in west and north-central Alberta, Local Improvement Districts 65, 76, 77, 78, 95, 107, 108, 109, 101 and 102 were declared necessitous areas under The Agricultural Relief Advances Act. Seed and feed were advanced with freight paid to distressed farmers located in these districts.

The Municipal Districts of Athabasca, Westlock, Lac Ste. Anne, Leduc and Ponoka also passed the necessary by-laws to enable them to assist necessitous farmers in their districts.

Delivery quotas remained in effect to regulate the movement of grain to country elevators. Initial deliveries amounted to 300 bushels of wheat, 500 of barley or 800 of oats or any combination of these grains not to exceed a total of (100 units).

Pastures were excellent throughout the summer, however haying operations were constantly delayed on account of rain and a large part of the hay crop spoiled in the field or was baled or stacked in poor condition. Many farmers depending on meadow land for hay were unable to cut any of the crop because these low areas were completely flooded.

Much of the acreage left for summerfallow in central Alberta, because of intention or necessity, grew up to volunteer grain and weeds because farm implements could not operate in the muddy fields.

The canning crop acreage and the sugar beet acreage in southern Alberta continued to expand. Yields of Canning Crops (with the exception of corn) were above average. Frost destroyed much of the canning corn just prior to maturity particularly in the Brooks area.

CROP IMPROVEMENT SERVICE

R. L. Pharis

Crop Improvement Demonstration Policy

Five crop improvement projects made up the policy, which is designed to aid District Agriculturists in demonstrating the value of better crops and better farm practices.

Project A: Forage Seed Production

This project was used to introduce forage seed production in areas where this type of enterprise might become important. A total of 111 applications was received from 22 District Agriculturists. 5,040 pounds of seed were used in this project.

Project B: Pasture Improvement

This project was continued to increase farmer interest in the need for better pastures.

One hundred and seventy applications were received from farmers in 31 District Agriculturists' territories.

A variety of forage seed totalling 17,670 pounds was used in this project.

In addition, fertilizer was supplied to applicants who had established pasture under the project in previous years. The following quantity was used:

Ammonium Phosphate (16-20) 3,000 lbs.

Project C: Balanced Farming

This project was set up to encourage farmers to adopt suitable crop rotations. Assistance by providing forage seed was given in the second year of the rotation, at a discount of 25% for 1/6 of the acreage up to a maximum of 25 acres. There were 17 applications from 4 District Agriculturists' areas; 4,596 pounds of forage seed being distributed.

Project D: Field Demonstrations—Crops and Fertilizers

This project was designed to demonstrate the value of different kinds and varieties of field crops, and, where advisable, the value of fertilizer on these crops. Seed and fertilizers were supplied direct to District Agriculturists without cost, quantities supplied being limited to each District Agriculturist. Seven District Agriculturists used the project.

The following quantities of seed and fertilizer were distributed:

Total Forage Seed	582 lbs.
Ammonium Phosphate (11-48)	920 lbs.
Ammonium Phosphate (16-20)	900 lbs.
Ammonium Sulphate	100 lbs.
	1,920 lbs.

Project E: Crop Variety Demonstration Plots

This project was used by District Agriculturists to demonstrate the varietal differences in the cereals and the growth habits of forage crops. Seed and fertilizer for row demonstrations were provided to 13 District Agriculturists.

Forage Crop Seed Production

Cold rainy weather during the flowering and seed setting period was one factor that caused a marked reduction in the production of legume seed, additionally the comparatively low prices received for forage seeds the preceding year resulted in a diversion to other crops. The following figures give the estimated seed production of the most important forage crops in the years 1950-1954 inclusive:

	Thousand Pounds				
	1950	1951	1952	1953	1954
Alfalfa	9,000	1,900	6,900	6,700	1,500
Sweet Clover	12,000	3,200	7,500	5,250	1,000
Red Clover	900	600	1,900	2,000	1,000
Alsike	1,700	1,100	7,500	9,000	3,000
Timothy		154	359	235	200
Crested Wheat	200	220	300	235	300
Brome	6,000	4,500	7,000	6,000	4,000
Creeping Red Fescue	400	1,350	2,425	6,100	6,620

Prices for legume seeds were higher than last year but the price of creeping red fescue slumped badly during the harvest season.

Alberta Crop Improvement Association

This Association is primarily concerned with improvement in quality of commercial grains by the wider use of registered and certified cereal seed. As in preceding years, participating elevator companies and the Alberta Seed Growers' Co-op. handled the distribution.

Bushels of registered and certified seed, marketed in this manner in 1954, as compared with prior years, were as follows:

	1950	1951	1952	1953	1954
Wheat	38,623	24,445	39,007	31,334	72,906
Oats	47,227	46,216	47,123	19,309	27,120
Barley	14,082	18,464	14,886	13,704	21,108
Flax	820	2,411	4,130	1,247	4,866

The Association was directed by a committee of representatives from the following organizations: North-West Line Elevators Association; the farmer-owned elevator companies; Plant Products Division, Canada Department of Agriculture; the Alberta Seed Growers' Co-operative; the Canadian Seed Growers' Association, Alberta Branch; the University of Alberta, and the Alberta Department of Agriculture.

Production of Registered Seed

In the following table, a summary is given of estimated yields of cereals and flax, inspected for registration and certification:

	Estimated Yield (Thousand Bushels)				
	1950	1951	1952	1953	1954
Wheat	375	1,000	1,270	1,204	*
Oats	414	1,775	1,200	1,017	
Barley	153	620	570	362	
Flax	14	113	115	73	

*1954 estimates not given due to extensive frost damage.

These figures indicate that production of registered and certified seed was far above the distribution of sacked and sealed seed. Some of this seed was sold in bulk in farm-to-farm transactions. No doubt a large quantity was marketed commercially or fed on the farm.

The table below is a summary of reported acreage of grass and legume crops inspected for registration and certification over a four year period:

	Registered Acres				Certified Acres			
	1951	1952	1953	1954	1951	1952	1953	1954
Alfalfa	7,256	6,209	2,419	227	659	718	366	453
Brome	89	20	4		21,775	23,242	27,700	19,820
Creeping Red Fescue	53	484	190	600	6,477	9,127	16,139	31,614
Crested Wheat	36	23	23		278	155	410	550
Red Clover	215	122	275.5	177	157	245	83	206
Sweet Clover	392		2		954	951	392	312

The Alberta Varietal Zonation Committee

This is an advisory committee to the Provincial Seed Board. Its purpose is to co-ordinate the findings of the various experimental agencies in the province with respect to grain varieties, and to recommend those best suited to the various soil climatic zones. The committee is composed of representatives from the following: Department of Plant Science, University of Alberta; Canada Experimental Farms, Science and Production Services; and the Provincial Field Crops Branch. The annual meeting of the Committee was held in December, with only minor changes in recommendations being made. Royal Flax was replaced by Redwood in Zone 1 and deleted from Zone 2A.

The recommendations of the Committee were prepared for printing in leaflet form, and distributed by the Field Crops Branch throughout the province.

Forage Crops Advisory Committee

The Committee prepared a bulletin outlining the rates of various pasture and hay mixtures that have proven suitable in Alberta. This was published and distributed by the Field Crops Branch.

Silage was the main topic of the December Annual Meeting and it was decided that information would be assembled in preparation for the release of a bulletin on silage.

International Seed Shows

Since the value of international shows as show windows for farm products is recognized, the Department has for many years given assistance to exhibitors in the seed classes at the Royal Agricultural Winter Fair, Toronto, and the International Grain and Hay Show, Chicago. Exhibits were assembled and shipped to the shows by the Field Crops Branch, with shipping costs both ways being paid by the Branch. The exhibits were supervised at the shows, and in 1954 special premiums were paid as follows: (All prize monies won at the International were duplicated and they were increased by 50% at the Royal). A special honorarium of \$25.00 for each first prize won at the Royal in the classes for hard red spring wheat; early and late white oats; six-rowed barley; two-rowed barley; rye; flax; alfalfa; alsike; red clover; sweet clover; brome; red fescue; and russet (Netted Gem) seed potatoes was paid. A similar honorarium was paid for each first prize at the International, in the classes for red clover; sweet clover; alsike clover; alfalfa; timothy; crested wheat; brome; creeping red fescue, hard red spring wheat; white oats; six-rowed barley; two-rowed barley; rye and flax. Such honoraria were increased to \$100.00 for championships won with exhibits of hard red spring wheat; white oats; barley and forage seed at both shows and for the championship in rye at Toronto.

Winners of first prizes and championships were as follows:

Royal Agricultural Winter Fair:

Championships:

Hard Red Spring Wheat	Ronald Leonhardt, Drumheller	Chinook
Barley	Geo. S. Snow, Milk River	Compana
Rye	Thos. E. Brown, Cassils	Petkus
Legume Seeds	Grotkowski Bros., Grande Prairie	Red Clover

Reserve Championships:

Hard Red Spring Wheat	Norman Johnson, Granum	Chinook
Table Potatoes	T. Ohama, Rainier	Netted Gem
Legume Seed	T. Corlett, Clairmont	Alsike

First Prize:

Durum Wheat	F. J. Schulz, Milk River	Stewart
Sweet Clover	Geo. Jordan, Wembley	
Early Oats	Geo. Jordan, Wembley	Larain
Late Oats	Thos. F. Rhatigan, South Edmonton	Victory
Cooking Potatoes	T. Ohama, Rainier	Netted Gem
6-Rowed Barley	Thos. E. Brown, Cassils	Trebi
6-Rowed Barley (Jr.)	Hella Delfs, Woking	Vantage

In addition 5 seconds and 47 other awards were won by Albertans.

International Grain and Hay Show:

Championships:		
Barley	Geo. S. Snow, Milk River	Compana
Oats	Tom Corlett, Clairmont	Larain
Reserve Championships:		
Beans	I. B. Roberts, Raymond	Pinto
First:		
Hard Red Spring Wheat	Norman Johnson, Granum	Chinook
Red Clover	Grotkowski Bros., Grande Prairie	
Alsike Clover	Grotkowski Bros., Grande Prairie	
Brome	J. Oster, Hamaruka	

In addition five seconds and 21 other awards were won by Albertans.

Seed Drill Surveys

Seed drill surveys were conducted in several Municipal Districts in 1949 to 1954, to determine the purity and quality of seed being sown. Seed samples were taken by Field Supervisors, Weed Inspectors and District Agriculturists, direct from farmers' seed drills at seeding time. The following is a summary of seed grades obtained on the samples taken:

Year	No of Districts	No. of Samples	No. 1 Seed	No. 2 Seed	No. 3 Seed	Rejected
*1928	Province Wide	1,225	13.3%	15.4%	22.3%	49%
1949	23	1,939	21.5%	10%	17.5%	51%
1950	12	835	32%	9%	19%	40%
1951	9	630	26%	17%	17.5%	39.5%
1952	10	702	28.3%	15.4%	15.1%	41.2%
1953	15	1,199	33.0%	12.0%	17.5%	37.5%
1954	19	1,540	31.5%	14.0%	17.0%	37.5%

*Carried out by Seeds Branch, Dominion Department of Agriculture

Comparison of Seed Grades Obtained From Different Cleaning Methods

Method	1953 Percentage				1954 Percentage			
	No. 1	No. 2	No. 3	Re-jected	No. 1	No. 2	No. 3	Re-jected
Elevator	24	7	24	45	23	12	15	50
Farm	29	12	18	41	31	16	17	36
Other Plants	33	9	15	43	41	7	20	32
*Portables	60	20	5	15	48	13	12	27
Municipal Plants	70	17	7	6	65	17	17	1

*1953—20 wheat samples—all from the County of Vulcan.

Comparison of Seed Treatments for 6-Year Period

Year	No of Samples Reported	Formalin	Percentage Mercurials	Treatment	
				Non-Mercurials	None
1949	926	44.6	44.5		10.9
1950	570	35.0	44.2	5.6	15.2
1951	601	36.6	45.8	2.0	15.6
1952	151	33.3	46.7	1.3	18.7
1953	862	21.7	59.1	8.1	11.1
1954	1,286	13.0	67.0	4.0	16.0

The seed drill survey results indicate a lack of realization on the part of farmers regarding the importance of good seed. However, there are indications that, in recent years, there has been some improvement.

Canadian Forage Project

This project is sponsored by the Canada Department of Agriculture in co-operation with Provincial Departments. Recognizing the lag between the production of new forage varieties, and their acceptance by and availability to farmers, this project was designed to make larger quantities of pedigreed seed available. Alberta growers have co-operated in the program with the production of Lasalle clover under contract. Approximately 255 pounds of foundation and registered approved seed were allocated to 17 Alberta growers in 1953. These growers harvested approximately

16,000 pounds of rough seed in the fall of 1954, all of potentially registered approved or registered status. In 1954, 235 pounds of foundation seed of Lasalle clover were allocated to 15 growers in the Brooks and Hays Irrigation Areas. 3 pounds of Vernal alfalfa were allocated to Alberta for increase in 1953 and produced 240 pounds of seed in 1954. 50 pounds of foundation seed of Summit Crested Wheat Grass were allocated to six growers. 10½ pounds of foundation seed of Vernal alfalfa were allocated to three growers. 20 pounds of foundation seed of Erector sweet clover were allocated to one grower.

Foundation Stock Seed Allocation Committee

This Committee attempts to allocate the limited stocks of foundation seed to seed growers who will take the greatest advantage of it, and who are prepared to undertake production of elite seed. In this manner, registered stocks of the common varieties are maintained at high levels.

Other Activities

Talks were given at twenty-five farmers' meetings, attendance being approximately 2,000. Eight radio talks were given and fourteen articles prepared for Farm Notes. Judging of seed and crop exhibits was done at five seed shows and two summer fairs. Information was prepared relating to the production of seed of Lasalle Red Clover and Kentucky and Merion Blue Grass. A chart was prepared outlining the main characteristics, origin and status of cereal varieties of importance to Alberta.

Seed Cleaning Plants

At the beginning of 1954, there were nine Municipal Seed Cleaning Plants in operation. The tenth Plant went into operation in January. These Plants are located at the following points, listed in order of construction: Camrose, Westlock, Wetaskiwin, Morinville, Marwayne, Vegreville, Mundare, Rosebud, Strome and Vermilion.

During the 1953-54 cleaning season they cleaned over two million bushels of seed grain. Well over one million bushels of this seed was treated for seed-borne diseases, or wire-worm control.

All Plants, which operated the full season, did so at a profit after paying operating and overhead expenses. This surplus is set aside for: (a) possible reverses due to an off-season; (b) interest on share capital; (c) patronage dividends to shareholders.

During 1954, one plant on which construction was begun in the late fall of 1953, was completed at Willingdon. Four other plants were built at the following points: Myrnam, Paradise Valley, Loughheed and Stony Plain. This brings the total of Municipal Seed Cleaning Plants operating as of December 31st to fifteen.

The cleaning capacity of the plants is well over 300,000 bushels each for the operating season. As yet none have exceeded 270,000 bushels due to the fact that it has been difficult to persuade enough farmers to bring their seed to the plants during the fall months to keep them operating at capacity. The result is that during the winter and spring months, the plants are operating on a twenty-four hour basis, but still cannot handle all the seed grain offered. A more uniform flow of grain to the Plant during the whole operat-

ing season would result in a much higher output, and would reduce the number of farmers who cannot get their seed cleaned during the late winter and spring season.

Considerable experimental work in the removal of dust from the Plants was carried on through the 1953-54 operating season. The results were quite satisfactory, so that plants built in '54 were equipped with ventilating fans, and four of the older Plants have also installed similar fans. This installation removes most of the dust, thus making for better working conditions for the operators, and definitely reducing the fire hazard.

Experimental work was also carried out in applying liquid seed dressings by means of spray equipment. Equipment was built and mounted on one of the standard treating machines which use oiled powder dressings. This was successful and more machines are being equipped with this attachment.

In addition to the Municipal Seed Cleaning Plants, permits were issued to eighty-five privately owned plants. Some of these stationary private plants are doing an excellent job of cleaning seed, but their capacity is much less than the Municipal plants. There are also some portable plants capable of cleaning to Registered No. 1 seed grade. However the majority of the portables are limited to commercial seed work.

As many of these plants as time will permit are inspected each season by the Field Supervisor or Special Projects Supervisor to ensure that they are cleaning to seed grade. In a few cases permits have been withheld, or suspended, until necessary repairs, or improvements have been made.

A summary of the work done by the Supervisor during the season is as follows:

- (a) 45 meetings on plant business.
- (b) 36 plant inspections.
- (c) 61 trips to Municipal Plants re construction, installation of equipment and experimental work.
- (d) assisted in training five new operators.
- (e) instructed local crews on erection of steel bins for seed storage at Municipal District plants.
- (f) 8 farm calls re seed cleaning.
- (g) 6 Field Days and Plowing Matches handled for the Extension Service.

CROP PROTECTION SERVICE

W. Lobay

CROP INSECTS

Grasshoppers

There was a slight increase in the grasshopper infestation in 1954, both in the regions affected and in the intensity of population. Slightly drier conditions than in 1953 in these areas accounted for this condition. The following table shows the extent of this increase and the general picture since 1951, indicating the acreage affected in southern Alberta and the degree of infestation:

Year	Approximate Acreage Affected	Degree of Infestation
1951	10,000,000	From Moderate to severe
1952	3,000,000	From normal to light.
1953	500,000	Sub-light.
1954	830,000	Light.

The infested area this year extended from Taber to Medicine Hat to an average width of two townships. Small infestation areas were also centered around Lethbridge, Chin, Carmangay and Retlaw.

Hatching in southern Alberta commenced about the middle of May, which was about two weeks later than in 1953. Lateness of development resulted in practically negligible crop losses with the exception of some damage in the Bow Island area. In the fall of 1954, however, there was some slight damage to sugar beets along field margins in the Taber and Raymond areas. This was the first report by farmers of damage to sugar beets in recent years.

This has been the third year, where localized moderate infestations of grasshoppers appeared in the Peace River country. The affected areas were at Kinuso-High Prairie, Falher, Peace River, Berwyn, Hotchkiss, Peoria-Eaglesham-Tangent, Teepee Creek, Glen Leslie, Valley View and Fort Vermilion. Heavy infestations appeared along river banks and some meadows, from where hoppers moved into legume and forage crops. In most instances prompt action was taken to protect crops resulting in only minor losses. A large supply of the insecticide Aldrin was stored at strategic points for the convenience of farmers who needed this material.

The grasshopper policy of 1954 was the same as in 1953, under which farmers could obtain baits, sprays and dusts. Bait was available at no cost to the farmer, while Aldrin spray (25% concentrate) was sold at \$7.00 per gallon and Aldrin dust (2½%) 12 cents per lb. For the first time in many years there was no bait used anywhere in the province. Very favorable results in using sprays in the last few years is convincing the farmers of the superiority of these over baits.

The following table shows the extent of the control materials used in 1954 and gives other pertinent information regarding the grasshopper campaign. Data for the four preceding years is supplied for comparison purposes:

	1950	1951	1952	1953	1954
Acres of land infested . . .	10,000,000	10,000,000	3,000,000	500,000	830,000
Acres of crop land menaced . .	700,000	400,000	30,000	5,000	7,000
No. stations operated . . .	76	60	30	10	16
Bus. poisoned bait spread . .	184,000	103,062	631	50	0
No. farms receiving bait . . .	2,336	1,072	12	1	0
Estimated acres crop de- stroyed . . .	2,000	900	700	100	150
Estimated lb. technical chlor- dane used . . .	23,560	2,500	350		
Acres treated with chlordane spray . . .	6,550	1,500	550		
Estimated lb. technical Aldrin used . . .	13,000	10,000	800	65	2,060
Acres treated with Aldrin spray . . .	100,000	62,500	6,500	600	15,000
No. lb. 2½% Aldrin dust used . . .	45,000	22,000	550	50	500
No. acres treated with Aldrin dust . . .	4,500	2,200	55	8	60

The figures on insecticides indicated in the above table are those used under the grasshopper policy and do not include the

materials purchased by farmers outright from commercial concerns. Hence the estimates are conservative. Materials for distribution were stock-piled at Lethbridge, Edmonton and Youngstown.

A brief survey was made by this Branch in the Peace River area regarding the outbreak in some localities. The information obtained was supplied to the District Agriculturists, Field Supervisors and other Fieldmen for their use. Forecasts are difficult to make in the northern regions of Alberta due to a possibility of a two-year cycle existing among the predominant species.

The grasshopper forecast maps for 1954 were printed and released in February, and were supplied to all regions where grasshopper problems were anticipated. Elevator Companies co-operated in posting these in their elevators. In addition, the following information was issued to all District Agriculturists, Field Supervisors, station operators and municipalities:

- (1) The 1954 Grasshopper Control Policy.
- (2) Bulletin on "Baits, Sprays and Dusts for Grasshopper Control".
- (3) Revised mimeograph on "Application of Aldrin Sprays and Dusts".
- (4) Chart on "Precautions on the Use of Aldrin for Grasshopper Control".
- (5) Instructions to Station Operators on "The Preparation and Distribution of Baits".
- (6) Station Record Books for use in Sale and Distribution of Baits, Sprays and Dusts.

There were only a limited number of Provincial Fieldmen this year on grasshopper control work, who were also assigned to other pest control duties. They were stationed at Fairview, Youngstown, Medicine Hat and Lethbridge.

Wheat Stem Sawfly

Sawfly damage in Alberta this year was the worst since 1944, causing wheat losses to perhaps over two million bushels. Severe sawfly infested areas were mainly (1) between Lethbridge and Seven Persons extending as far south as Goddard, (2) in the Nobleford-Barons area, (3) centered around Lomond and (4) in the Schuler-Hilda areas. Moderate and lighter infestation surrounded these regions. Reports from the Lethbridge Laboratory of September 8, indicated that 70% of the stems had fallen in infested fields, and excessive moisture caused sprouting of the fallen heads. Weather conditions were likely responsible to a significant degree for the heavier infestation of this pest.

Rescue Wheat has played a prominent role in checking the widespread infestation of the sawfly, however, there have been sufficient sawfly-susceptible varieties in those areas to maintain a moderate population of these pests. With the availability now of a large quantity of Chinook Wheat (a superior quality to Rescue) which is also resistant to the sawfly, a significant reduction in the losses from sawfly is foreseen.

At every opportunity through the press, radio and Short Courses, this Branch has advocated the use of Rescue and Chinook Wheat in the infested areas, and/or to use other recommended practices to avoid losses.

Cutworms**(1) Pale Western Cutworm**

As in 1953, the Pale Western Cutworm caused only light and patchy damage in southern Alberta. Infestation were considerably reduced in extent of area and severity of damage as a result of a succession of years with more than normal rainfall in May and June. Some farmers in Acadia Valley region were given information on the use of chlordane to obtain control.

Science Service reports of rather abundant moth flight in southern Alberta between August 20 and September 15, indicate that some infestation can be expected in 1955.

(2) Red-Backed Cutworm

This pest was reported from a number of gardeners in the Parkland and Wooded regions of Alberta. It is the first time also for several seasons that this pest has been found in sugar beet fields in the Lethbridge and Diamond City area, causing about 10-15% damage in thinned sugar beet fields. A mimeograph which was prepared in 1953 on control measures of this pest was mailed to the District Agriculturists, and others who requested same.

(3) Black Army Cutworm

The populations of this insect were considerably reduced over that of 1953, when localized outbreaks caused serious damage to some alfalfa and cereal crops near Lacombe. This decrease was due to low winter survival and perhaps further mortality from disease. Control measures on this pest were tried in 1953 with satisfactory results, hence information on control, if needed, was available.

Armyworm

Outbreaks of the Armyworm occurred in all provinces of Canada from Saskatchewan to Nova Scotia, during July, 1954, in what is considered one of the three most widespread and severe outbreaks during this century. No outbreak or infestation was reported in Alberta.

Wireworm

Wireworms continued to take their toll of cereal and garden crops. Moderate to severe damage was noted at isolated points in the Peace River country and in the Alsask-Oyen region. Wireworm damage to potato crops was noted at Edmonton, Fort Saskatchewan, Camrose, and Lethbridge regions, in some fields up to 15% of the tubers were injured.

An extensive use by farmers of Benzene hexachloride seed dressings recommended for wireworm control resulted in considerable crop saving in Alberta. This Branch conducted a number of demonstrations in co-operation with the District Agriculturists to encourage seed dressings in wireworm infested areas. Aldrin, which showed good promise, was used in these demonstrations. Results appeared satisfactory. Aldrin has now been approved in Canada, for use as a seed dressing, and already a number of such commercial products have appeared on the market.

Wireworm control, by cultural and chemical means was a subject discussed at many Short Courses in 1954.

Sweet Clover Weevil

The extent of activities of this pest was similar to that of last year. Some damage to emerging crop was noticed in the Edmonton area but recovery was made after abundant spring rains. In the black soil zone area south-west of Macleod, severe damage was noted to sweet clover. The weevil was first reported in that region in 1947, with 1954 being the worst infestation experienced to date. Aldrin supplies for spraying were available at Municipal Offices but very little was used.

Lygus Bug

Lygus bug infestations in alfalfa fields remained about the same as last year.

English Grain Aphid

This was the first time in three years that this pest did not develop to economic levels in the Grande Prairie region, where emergency control measures were needed to protect all seeded crops. Supplies of Malathion sprays were maintained at the County of Grande Prairie.

There was a light infestation of the grain aphid in the Carman-gay district on fall wheat. Apparently the eggs were able to survive the winter to hatch this spring from populations which appeared during the fall of 1953 in that area.

Stored Grain Insects

The extent of infestations of stored grain by mites, Rusty and Saw-Tooth Grain Beetles and Fungus beetles was about the same as in 1953. A number of reports investigated in northern Alberta showed only mites or fungus beetles present. In southern Alberta an occasional infestation from scattered points revealed the presence of the Rusty beetle. Infestations in all cases were largely restricted to tough or heated grain.

Publicity continued to be given to this problem in 1954. As a result a number of farmers turned their grain during cold weather with favorable results. Much more could have been done in this regard. Three demonstrations were conducted by this Branch to show methods of fumigation for controlling these insect pests. Dowfume EB-5 and Dawson 73 were the fumigants used.

This Branch maintained the service of providing approved gas masks to farmers who wished to fumigate their grain. These masks were available through the offices of the District Agriculturists. Fumigants were readily available through many commercial channels.

In addition to the five circulars on insects infesting stored grain, released by this Branch in 1953, two new mimeographs were issued this year. One of these was the result of a Conference held in Calgary in July, where an Agricultural Engineer and Entomologists discussed the problem and made recommendations. The services of a special Fieldman to help farmers with their problem of insect pests in stored grain were maintained at Lethbridge.

Say's Grain Bug

This insect was moderately abundant in southern Alberta, with localized high populations at Turin, Taber, Chin and Pearce.

There was a considerable increase in numbers of this pest in 1954, likely due to a mild winter and decreased rainfall during the egg laying season.

Spruce Sawfly (Yellow-headed)

This insect has been on the increase in Alberta in the last few years. Heavy infestations this year appeared in the following regions: Provost, Calgary-Drumheller, Calgary-Leduc, and Three Hills. In early August, a very heavy outbreak in the Lacombe area necessitated emergency control measures. This Branch, in co-operation with the local District Agriculturists and Field Supervisor, arranged for a high-pressure (Hardie) sprayer and Aldrin spray for use by farmers. Some eighteen farmers used this equipment and material, and satisfactory results were obtained. This work served as a good demonstration on controlling the sawfly.

Alfalfa Weevil

In June, 1954, Dr. G. A. Hobbs, Science Service Laboratory, Lethbridge, discovered the presence of alfalfa weevil (*Hypera postica*), on the Dominion Range Experimental Station at Manyberries. This is the first recorded occurrence of the alfalfa weevil in Canada. Intensive surveys following this discovery have revealed that this pest is present in alfalfa fields at Manyberries, Orion, Aden, Milk River, Stirling and Cranbrook (Alberta). Its imported parasite *Bathyplectes curculionis* (Thomson) has also been found.

Since this weevil, when established, can become a major pest of our alfalfa crops, this Branch, in consultation with Entomologists, immediately distributed 25 gallons of Aldrin spray to farmers in known infested areas for immediate spraying. Later in the season, a Conference was called where two Entomologists from Montana, and many Agriculturists in Western Canada, concerned with production and protection of alfalfa, were assembled to discuss control measures and action to be taken to cope with this encroaching problem.

CROP DISEASES

1. Diseases of Cereal Crops

Common Root-Rot of wheat and barley was more prevalent and severe in southern Alberta but less severe than in 1953 in north-central parts.

Take-All Root Rot was less severe throughout the Province. There were a few moderate to severe infestations on the black soils east of Edmonton.

Loose Smut of barley was more prevalent and severe in north-central regions.

Covered Smut of barley was less severe than in 1953.

Oat Smut was more severe with 20% of fields in north-central Alberta infected up to 5%.

Ergot was found in trace quantities and was less severe in all crops including rye.

Wheat Streak Mosaic was more severe in southern regions. The frost-free, open fall of 1953 kept spring wheat green long after winter wheat emerged, allowing considerable dissemination of the virus by the large mite population. Ten per cent (10%)

of winter wheat fields suffered severe damage; 30 fields were reported plowed under.

Leaf Rust was less severe in the south but more severe in the north-central section. Most severe infection and damage occurred in east-central regions.

Stem Rust was more severe throughout the Province. Infection and damage was moderate to severe east of a line from Vegreville to Drumheller. Race 15B was found in the Vermilion-Lloydminster area as early as the seedling stage.

2. Diseases of Forage Crops

Bacterial Wilt was found in most older stands of alfalfa in southern Alberta, where wilt is the major disease in irrigated areas. In the north-central area, 63% of fields inspected were found infected; the increase here is considered to be in direct ratio to the increased moisture.

Crown Rot (snow mold) of alfalfa was less severe, since it is usually more damaging under drier conditions.

Common Leaf Spot of alfalfa is increasing in the north-central regions.

Northern Anthracnose was more severe in Red Clover.

3. Diseases of Potatoes

(a) General

The most common diseases of potatoes this year were black-leg, leaf-roll, rhizoctonia and wilts. In addition to these, the Edmonton area was hard hit by late-blight, with intensity being the most severe ever recorded in this region. This, coupled with frost damage prior to digging resulted in a significant crop reduction in the Edmonton area. Elsewhere this reduction was not significant, but due to excessive moisture during digging and because potatoes were stored in poor condition, many farmers lost their crop in storage. One large grower at Rainier lost 90% of his crop while another one reported a 50% loss.

(b) Bacterial Ringrot Control Program—1954

In October and November of 1953, the Department of Agriculture, Field Crops Branch, purchased 130,636 pounds of Foundation and Foundation A seed potatoes in keeping up with the practice of providing quality seed to growers who had to dispose of their diseased stocks into channels approved by the Department. This was stored in the Lethbridge cellar and graded out into such grades in the spring of 1954 as requested by the respective purchasers. No seed was held by the Department in the Brooks, Calgary or Edmonton districts but at least 80 growers were assisted in locating approved seed. The practice of providing quality seed in the Lethbridge areas and keeping a close check on available seed in other areas has been one important factor in keeping the incidence of ringrot to a minimum.

This year the stocks infested with ringrot were disposed of by March, although a significant percentage was moved right out of the field in 1953. All storage premises on farms where Ringrot appeared were thoroughly fumigated prior to the bringing in of any new seed and again before the new crop was stored. Fumiga-

tion is another service which this Branch provides in the Ringrot control program.

This year there were 14 inspectors employed in making the Ringrot survey in the fall. Two training schools were held at Edmonton and Lethbridge where detailed instructions and field practice was provided to train Inspectors conducting surveys. All Inspectors were familiar with Ringrot disease, the recognition and identification of symptoms, and methods of collecting suspected samples. The number of Inspectors in the pest areas in the last two years, and the acreage inspected were as follows:

Area	1953		1954	
	No. Inspectors	Acreage Inspected	No. Inspectors	Acreage Inspected
Edmonton	4	2,202	5	2,291
Calgary	2	191	2	271
Brooks	2	1,230	2	1,130
Lethbridge	6	3,977	5	3,911

Inspection services commenced August 28 at Lethbridge and September 2 at other points. Due to exceptionally wet roads and field conditions, the work was not completed until September 23. This included a large number of fields which required re-inspection due to the lateness of the crop.

The table below shows the number of fields and the acreage inspected in the pest areas in 1954. The 1951-1953 results of the survey are also included for comparison purposes:

Results of the 1953 Ringrot Survey by Pest Areas

Also Showing Years 1951-1953 Inclusive

Pest Area	Year	No. Farms Inspected	No. Farms Diseased	Acreage Inspected	Acreage Diseased	% Diseased of Total Farms	% Diseased of Total Acreage
Lethbridge	1951	313	31	4,000	220	9.9	5.5
	1952	282	59	3,284	759	20.6	23.1
	1953	281	58	3,977	1,144	22.4	28.7
	1954	276	17	3,911	144	6.2	3.7
Calgary	1951	111	4	235	15	3.6	6.4
	1952	64	0	144	0	0	0
	1953	66	5	191	26	7.5	13.6
	1954	87	0	271	0	0	0
Brooks	1951	92	2	1,230	24	2.2	1.9
	1952	69	2	1,055	5	0.03	0.5
	1953	61	3	1,160	65	4.9	5.6
	1954	58	7	1,131	134	12.0	11.8
Edmonton	1951	255	22	2,008	219	8.6	10.9
	1952	187	14	1,802	56	7.6	3.1
	1953	195	9	2,202	144	5.2	6.5
	1954	210	3	2,291	39	1.5	1.8
Total	1951	771	59	7,473	478	7.7	6.4
	1952	601	75	6,286	819	12.5	13.0
	1953	603	75	7,530	1,379	12.4	18.3
	1954	631	27	7,604	317	4.3	4.2

There were a total of 631 fields examined in the pest areas which was 28 more than last year. The total acreage was 7,604, averaging 543 acres per Inspector (45 fields per Inspector).

In the over-all picture, there was a highly significant reduction in the incidences of Ringrot in the Province over last year both in the total fields and total acreage. Considering that the total acreage has been increased over last year, this would indicate a bright picture for checking Bacterial Ringrot in the Province. This drastic reduction in 1954 may, however, have been influenced to some degree by the exceptionally poor growing conditions and late crops especially in the Brooks and the Edmonton areas.

It is interesting to note that in 1954, there was only one occurrence of Ringrot found in the Calgary area. Most of the fields

were small so that the limited stocks were consumed locally. A high percentage of growers using quality seed is one factor responsible for elimination of Ringrot from this area.

In the Edmonton area Ringrot has been reduced to the lowest mark in the last eight years. Only three fields of the 210 inspected showed Ringrot. Even on these fields only one or two infected plants were found. Because of extremely unfavorable field and growing conditions, inspection was very slow and many fields were re-inspected two and three times. With growers taking better care of handling their stocks and using better seed, the results are favorable.

Conditions for inspections at Lethbridge were good. It will be noted that out of 3,911 acres inspected, 144 or 3.7% were found diseased. This is a near record for the Lethbridge area and certainly points very favorably for the district, considering that 22.4% (1,114) of the total inspected acreage was infected in 1953. A smaller percentage of new growers coupled with much extension work on potato improvement were two factors which may have contributed to this bright picture for Lethbridge.

The only district where Ringrot increased in 1954 was Brooks. This disease was found on seven farms involving 134 acres. Ringrot has been steadily decreasing in this area until this year. The disease is mainly confined to the Rosemary district; a special lot of seed used coupled with old sacks are suspected to have increased the incidence.

Potatoes which were imported into the Province were checked for Ringrot. No infected shipments were found this year. Regulations established in the Province respecting the inspection of imported potatoes is aiding in the program to control Bacterial Ringrot.

LIVESTOCK PESTS

Cattle Grubs (Warble Flies)

There was more interest shown in treating cattle for warble fly control this year than in 1953. The Municipal Districts of Wainwright, Turner Valley and Lacombe, as well as a number of others, conducted special programs through their Agricultural Service Boards. Some Livestock Associations also encouraged and conducted spraying programs. A few other Municipalities made arrangements for purchase of power equipment to conduct a campaign in the spring of 1955.

Estimates indicate that there were about 375,000 head of cattle sprayed. The table below shows the estimated figures for the last six years:

	1949	1950	1951	1952	1953	1954
No. cattle treated for warble fly control	400,000	300,000	300,000	375,000	375,000	375,000

This Branch issued circulars on warble fly control to all District Agriculturists, Fieldmen and Municipalities for distribution to farmers and ranchers. A spraying demonstration was commenced in the Municipal District of Stony Plain which will be continued for a number of years. The demonstrations at the Municipal District of Smoky Lake were discontinued.

Cattle Lice

Observations have indicated that quite a number of cattle in Alberta are affected. No special programs were conducted to cope with this problem, but an attempt was made through the farm press, radio and meetings to encourage farmers and ranchers to treat for lice in the fall of the year before the onset of cold weather.

RODENT CONTROL

Pocket Gophers

Pocket gopher problems continued to increase in 1954. These were especially pronounced east of the Edmonton area stretching to Vermilion and district. A fairly large number of mimeographed pamphlets were distributed from this Branch outlining control methods.

Columbia Ground Squirrel

This pest has been on the increase in a number of areas in the foothills of south-western Alberta.

Norway Rats

The eastern border area of the province experienced a large invasion of Norway rats during the warm, open fall of 1954. There has been a further extension northward of the invasion area. One colony was exterminated at Onion Lake in December, marking the northern extremity and the first established colony reported north of the North Saskatchewan river. The infested area extends south along the 4th Meridian to the Cypress Hills. Rats are, for the most part, confined to Ranges 1 and 2 and no significant advance westward has been made over the last year.

The colonies are being wiped out as they converge at farmsteads and urban premises for winter quarters. Farmers and other residents are being encouraged to clean up their premises, thus eliminating food and shelter and to construct and maintain rat-proofed buildings. Interest and co-operation is improving, especially in cases which have actually experienced rat infestation and resultant damage.

The "poison proofing" with arsenic, contact powder, during 1952-53, is still effective in places. However, a considerable amount of this powder has become caked and ineffective for poisoning rats, following the excess moisture of the last two years. Warfarin and Pival poison baits, plus carbon monoxide gassing, are the main control measures in use. The above poisons are supplied, free of charge, in both the concentrate and ready-to-use forms. During the year 20 lbs. of Warfarin Concentrate and 3,543 lbs. of Warfarin Ready Mixed Bait were distributed. Other new rodenticides and formulations were tested on caged rats and under natural conditions. One result of these trials was the addition of water baits to existing control measures. Since this material was not available in Canada, 50 lbs. of bulk Water-Soluble Warfarin was purchased and packaged into 2,000 packages by this Division. About 600 packages, making 600 quarts of water bait, have been distributed.

All Municipalities, cities, towns and villages were asked to confirm appointment of Pest Control Officers to handle local rat problems. To date a total of 240 officers have been appointed

throughout the province. Seven Provincial Pest Officers, stationed at Edmonton, Fairview, Vilna, Oyen, Medicine Hat and Lethbridge, checked reports and assisted local officers in the rat control campaign.

One full-time Provincial Pest Officer supervised the campaign in the border area, demonstrating and applying control measures, distributing poisons, etc. Starting in November, border Municipalities were granted 50% towards salary and expenses of a full-time Pest Control Officer on rat control. To date the Municipal Districts of Vermilion River, Wainwright, Provost and Special Areas have appointed officers under this plan. These men make farm-to-farm checks, applying and demonstrating control and preventive measures.

Rat posters and various literature have been distributed through District Agriculturists and Pest Control Officers to get the public more "rat conscious". Fifteen thousand (15,000) copies of pamphlet "Kill Rats With Warfarin" were distributed. The bulletin "Rat Control in Alberta" was revised, printed and distributed this summer. Pest control kits were supplied to all appointed officers and District Agriculturists. Nine meetings were held in the border area, where rat control was the main topic discussed. A number of demonstrations were also conducted.

COYOTE CONTROL

In 1954, the following approved poisons were supplied free of charge for use in coyote control in the settled areas of the Province:

- (a) cyanide—in the form of "coyote getters".
- (b) strychnine—as special pellets, each containing 2.18 grains of strychnine.
- (c) sodium fluoroacetate—or "1080" used in preparing meat baits.

There was one new district which accepted the Provincial Coyote Control Policy in 1954, making a total of 82 Municipalities, including Counties, Improvement Districts and Special Areas. The following table shows the number of districts and the years in which they accepted the policy:

	1951	1952	1953	1954	Total
Counties		1	1		2
Municipal Districts	26	12	13	1	52
Improvement Districts	5	12	8		25
Special Areas	3				3
Total Districts	34	25	22	1	82

Since 1951, when the Department of Agriculture undertook the control of coyotes in the settled areas, a total of 34,300 coyote getters, 90,100 cyanide cartridges and 308,000 strychnine pellets have been distributed by Provincial and Municipal Pest Control Officers. Demands for material continued at the high level of 1953. Coyote getters, scent, pellets and other allied materials, posters and various necessary forms were supplied to the field force, almost daily. As an example of the extent of material released, there were 7,400 jars of scent shipped and 35,000 warning signs, which were posted as a safety precaution to indicate sets. There was an increase in the use of strychnine as compared to coyote

getters. The former method was approved in 1953 and found easier to apply for the average farmer with satisfactory results. The following table shows the amounts of major materials supplied since 1951:

	1951	1952	1953	1954	Total
Coyote Getters	5,660	4,530	18,800	5,310	34,300
Cyanide Cartridges	11,510	12,460	46,030	20,110	90,110
Scent (2 oz. jars)	1,050	1,350	8,120	7,370	17,890
Strychnine (pellets)			116,000	192,000	308,000

This Branch continued to assume its share of responsibility in the campaign to control rabies. Twelve Provincial Pest Control Officers were fully employed in the spring in northern Local Improvement Districts. During the summer this force was increased to fifteen, on part time work, twelve of whom returned to full time work this fall. Coyote control, as noted by the amount of materials used, was intensified in all regions.

The poison 1080 was restricted to sparsely settled areas in southern Alberta with a limited number of stations in the northern regions, in special cases only. As requested by the Municipalities and approved by the Minister, the following number of 1080 baits were prepared and set during November and December in areas as shown:

District	No. Baits Prepared
Pincher Creek M.D. No. 9	29
Cardston M.D. No. 6	55
Forty Mile M.D. No. 2	22
L.I.D. No. 1	9
L.I.D. No. 11	9
L.I.D. No. 22	12
L.I.D. No. 46	20
County of Newell No. 4	28
Willow Creek M.D. No. 26	9
Bow Valley M.D. No. 40	18
Foothills M. D. No. 31	18
Army Experimental Range (Ralston)	9
Wainwright Military Camp	32
Special Areas No. 2 and No. 3	57
Blood Indian Reserve	9
Lac Ste. Anne M.D. No. 93	31
Bonnyville M.D. No. 87	14
	<u>381</u>

The County of Grande Prairie was removed from the approved list at the request of the Council, and no 1080 stations were established at the point.

The booklet, "Poisons for Coyote Control" was in strong demand by the field staff as well as the farmers.

Pest Control Officers continued to hold coyote control "schools" in all regions this year.

Educational Publicity, Meetings, Field Days, Extension, etc.

In co-operation with the District Agriculturists and Field Supervisors there were approximately 34 wireworm and smut control trials set out this year. Many of these were checked in the spring for grain emergence. Eighteen of these were harvested, threshed and analyzed to determine differences in treatment. In addition six fungicide trials were set out in different soil zones with the hope of obtaining information over a number of years as to the reaction of some fungicides on different soils.

A new Crop Protection and Pest Control display was prepared in 1954, featuring (1) Bacterial Ringrot Control of Potatoes, (2)

Field Crop Insect Control, (3) Rat Control and (4) Coyote Control. This was exhibited at Short Courses at Lethbridge and Calgary.

Acknowledgment

Sincere appreciation and grateful acknowledgment is hereby made to the many Entomologists and Pathologists of the Canada Department of Agriculture, and the University of Alberta, for providing this Branch with the results of various surveys and for their assistance and information in planning and conducting programs for the control of plant diseases and insect pests.

Appreciation is also gratefully acknowledged to the Department of Zoology, University of Alberta, for the assistance provided in identifying various rodents and other specimens submitted.

SOIL CONSERVATION AND WEED CONTROL

G. R. Sterling

Weeds

Weeds were difficult to control during 1954. Moisture was so excessive in many areas that cultivation was impossible. Much summer fallowed land was not worked until fall. Many fields were not sprayed with herbicides because they were too wet to carry machines during the spraying season.

Chemical Weed Control

The area treated with herbicides such as 2,4-D or MCP, was less in 1954 than 1953. The following figures show the acreages treated with herbicides during the last three years:

1952	3,259,000
1953	3,420,000
1954	2,981,000

The Branch distributed sodium chlorate and Polybor chlorate through Municipalities to farmers at cost. The largest percentage was used for Toad Flax control. Total distribution of soil sterilants increased considerably during 1954.

Pounds of Soil Sterilants Distributed for the Last Five Years					
	1950	1951	1952	1953	1954
Sodium Chlorate	207,940	290,000	330,626	333,088	414,948
Polybor Chlorate			25,784	36,600	24,984
Total	207,940	290,000	356,410	369,688	439,932

Weed Control Demonstrations

The Branch continued the two Tartary Buckwheat control demonstrations at Royal Park and Stony Plain.

MCP demonstrations to control weeds in forage crops were established and observed. Four trials of soil sterilants were established and those laid down during 1953 were checked. Two demonstrations were conducted with MH to control quack grass.

The Branch assisted District Agriculturists and Field Supervisors in various ways to establish 107 demonstrations. A total of 165 Field Days were held in connection with demonstrations established during 1954 or 1953.

Roadside Seeding and Spraying

The Branch did not seed as many miles of highways for the Department of Highways during 1954 as 1953. Much of the 1953 construction was seeded in the fall of that year, but summer rains prevented road construction until fall and consequently fall seeding in 1954 was not possible. 200 miles were seeded, using 11,995 pounds of forage seed.

The Branch gave Municipalities encouragement to seed down newly constructed roads. A total of 24,885 pounds of forage seeds was supplied to Municipal Districts for this purpose.

The Branch used a sprayer to establish brush and weed control roadside demonstrations. Twelve Municipalities, mostly in the north-central part of the Province, took advantage of this service and sprayed roadsides. The machine, equipment and operator were loaned to the Department of Highways for a week to establish brush control demonstrations for the District Engineer, Department of Highways, at Peace River. All of the work in the Peace River area was for brush control.

Crown Lands

The Branch continued to supply 2,4-D for weed control on Crown Lands, provided nearby farmers affected by the weeds on the Crown Lands applied the chemical. Farmers leasing weed infested Crown Lands were supplied with enough forage seed to cover the infested area in order that the weeds could be controlled. Most of such Crown Lands were accrued lakeshore areas. A total of 1,620 pounds of forage were supplied for this purpose.

Agricultural Service Boards

The Municipal District of Lac Ste. Anne re-organized its Agricultural Services Board during 1954 after discontinuing it for 1953. A total of 36 Boards operated making one more than the previous year. Four Field Supervisors resigned to do other work.

Several Boards hired extra men as Weed Inspectors during the summer months. A total of 51 such men were employed.

The Service Boards placed a total of 27 parcels of land under supervision during 1954. A total of 12 were released from supervision. Six (6) parcels were placed under reclamation and two (2) released. Field Supervisors and Assistants issued 2,070 notices to destroy weeds, covering 39,356 acres. Notices Prohibiting Seeding in '54 covered 14,362 acres.

Service Board Agreements

The general agreement provided assistance toward operating the Board to a maximum of \$1,800.00 plus assistance for Bang's Control. In addition, some Municipal Districts had special weed control agreements. All covered assistance for Toad Flax control and included half the cost of Sodium Chlorate in excess of \$5.00 per drum when used on farm lands, (maximum of 3 drums per quarter section); half the cost of chlorate or other soil sterilant on Municipal roads; and assistance for cultivation at \$5.00 per acre to a limit of 20 acres per quarter section.

The following Municipal Districts were given assistance for Toad Flax control as outlined above:

Municipal District of Minburn No. 72
Municipal District of Athabasca No. 103
Municipal District of Wetaskiwin No. 74
Municipal District of Peace No. 135
Municipal District of Vermilion River No. 71
Municipal District of Kneehill No. 48
Municipal District of Flagstaff No. 62
Improvement District No. 132

Field Staff

The Branch employed 18 Weed Inspectors to enforce The Noxious Weeds Act in Improvement Districts. Three Supervisors were employed to assist Weed Inspectors, both in Municipal Districts and Improvement Districts. A total of 149 men worked on weed control throughout the Province during the summer.

Extension, Meetings, Field Days, etc.

The Supervisor of Soil Conservation and Weed Control spoke at 24 Short Courses, arranged by District Agriculturists, judged 4 Seed Fairs, went on 10 Field Tours in as many Municipalities, attended 5 Field Days and 14 Agricultural Service Board meetings.

Miscellaneous

The Supervisor worked on a Committee set up to interview and generally assist Veterans of the Wanham Project. Two series of meetings were held, each series involving 5 days' work.

He spent 4 days investigating and reporting on the dispersal of salt water from wells in southern Alberta for the Petroleum and Natural Gas Conservation Board.

He spent 3 days with an Engineer from Water Resources Branch, inspecting run-off problems in the Glen Leslie district and one day checking agricultural problems in the Burnt and Sylvan Lake areas.

Soil Conservation

The wet summer of 1954 caused considerable water erosion. Water erosion during the spring was evident all over the Province even in those areas generally considered as semi-arid. The heavy hail and rain storms caused damage on summerfallowed land except in the drier southern parts of the Province. A questionnaire completed by Field Supervisors indicated that 673 parcels were damaged by wind erosion (mostly in east-central parts of the Province) and 10,607 damaged by water erosion.

Four Municipalities held gully filling demonstrations during 1954.

Projects 1 and 2 of Soil Conservation and Weed Control with forage crops were continued during 1954. Project 1 was designed to assist District Agriculturists and farmers to establish soil conservation demonstrations. Nine District Agriculturists used this policy to establish demonstrations on forty-one farms. A total of 14,603 pounds of forage seed was distributed under this policy.

Project 2 was designed to assist Municipalities to handle farms placed under supervision or reclamation by authority of The Agri-

cultural Service Board Act. Three Municipalities took advantage of this policy for assistance on five farms. A total of 1,126 pounds of forage seed was distributed under this policy.

More farmers in the Claresholm and Calgary districts showed interest in contour cultivation or contour farming. The Branch assisted farmers to establish contours and terraces on farms in the Claresholm and Vulcan districts. More contours were added on a farm partly contoured in 1953 in the Calgary district. Results of the contour and terrace work on this farm were very favorable.

Save the Soil Campaign

The Branch assisted District Agriculturists with Save the Soil Competitions. "Save the Soil" certificates were issued to 27 farmers whose score was 80% or more.

Fertilizers

Three fertilizer trials of the five established in the fall of 1953 were harvested in 1954 and results reported to the Advisory Fertilizer Committee. The Branch supervised the co-op fertilizer trials conducted in the Peace River area. The Fertilizer Bulletin was revised and about 10,000 copies distributed during 1954.

HORTICULTURE

P. D. McCalla

Tree Planting

In 1954, 2,354 Alberta farmers planted 2,164,484 trees. This is a 25% increase over 1953. The Federal Government Forest Nursery Stations at Indian Head and Sutherland supplied 1,482,633 trees. The Alberta Government Nurseries at Brooks and Oliver supplied 681,851 trees.

The two Government mechanical tree planters were used again for demonstration purposes. In 1954, 34 tree planting demonstrations were held, the machines planting 100,930 trees. Demonstrations were held at the following places: Strathmore, Drumheller, Lethbridge, Cardston, Claresholm, Wainwright, Vermilion, Westlock, Coronation and Edmonton.

As in previous years the majority of trees were used for Farmstead shelterbelts. However each year a greater percentage of trees are being used to establish Field windbreaks and Roadside plantings to assist in soil erosion control and highway protection and beautification.

The weather in 1954 was excellent for tree planting. The moderate temperatures and ample supply of moisture throughout the growing season ensured a very high percentage of the trees planted, surviving. As in previous years the most serious losses were with hardwood cuttings of poplar and willow, but because of greater care taken at the Nurseries to ensure only strong healthy wood being sent to farmers these losses were considerably reduced from previous years.

Forest Nursery Station, Edmonton

In 1954, 119,950 hardwood cuttings of poplar and willow and 501,800 trees were supplied to 1,218 applicants. This was an in-

crease over 1953 of 43% in the numbers of trees supplied and a 49% increase in the number of farmers receiving them from this Nursery.

At the end of the year there were 355,500 white spruce, 275,000 Colorado spruce, 200,000 Lodge Pole pine, 100,000 Englemann spruce, 85,000 Siberian larch and 5,000 Scotch pine in the Nursery. In addition to the Evergreens there were 1,078,750 Caragana, 30,000 Tartarian Honeysuckle, 76,425 Manitoba Maple, 49,000 Green Ash, 20,000 American Elm, 1,000 Hansen Hedge Rose, 1,000 Manchurian Elm, 2,000 White Birch, 500 Mountain Ash, 100,000 Lilac and 5,000 Rosybloom Crabapple. The total number of trees growing in the Nursery in December, 1954, is 3,058,675.

1954 was not a good year for tree seed production, however the employees at the Nursery were able to gather the following quantities of seed: 45 lbs. of White Spruce, 10 lbs. of Colorado Spruce, 3 lbs. of Siberian Larch, 80 lbs. of Manitoba Maple, 41 lbs. of Green Ash, 30 lbs. of American Elm and 20 lbs. of Mountain Ash. \$700.00 is a conservative estimate of the value of the tree seed gathered by the Nursery Staff. The Forest Rangers of the Department of Lands and Forests assisted this program by gathering cones of spruce and pine.

During the summer seven men were employed at the Nursery. In addition extra help was needed at shipping and transplanting time and six patients from the Oliver Hospital were used throughout the growing season.

Because the procedure for packaging and shipping trees was improved it was possible to ship 43% more trees in the same time as the previous year. A large concrete apron was built at the back of the packaging shed for handling peat moss. Gravelling of the Nursery roads, both around the buildings and through the Nursery proper, was continued. Dead trees in the Nursery shelterbelts were replaced and fifteen acres of land prepared for transplants in 1955. A large quantity of peat moss was trucked to the Nursery and stock piled for use in shipping in 1955. The major effort of the Nursery employees during the summer months was the controlling and eradicating of weeds. Because small trees cannot tolerate the common chemical weed killers this involved much hand work in addition to using mechanical methods. This program was aided considerably by the purchasing of a second tractor. In addition through the courtesy of one of the large chemical firms trials were set out to study the feasibility of controlling weeds by some of the newer chemicals. First year results appear promising and this program will be continued in 1955.

Potato Production

It is estimated that 15,600 acres were planted to potatoes in 1954. This is a 200 acre increase over 1953.

Seed Potato Production

The following table is a five-year summary relative to seed production in Alberta:

	1950	1951	1952	1953	1954
No. of Growers	156	114	81	86	70
No. of Fields Inspected	293	212	177	200	223
Acres Inspected for Certification	1,684	975	702	942	1,022
No. of Fields Receiving Certification	247	183	163	168	198
Acres Passed for Certification			578	844	905

Tuber Indexing of Foundation Seed

The service of indexing foundation potatoes was continued jointly by the Field Crops Branch; University of Alberta and the Canada Department of Agriculture. 1,656 tubers, an increase of 116% over 1953, were grown in the Greenhouses at Brooks Horticultural Station and disease readings taken late in the spring by a competent pathologist. 50% of the tubers qualified as suitable for production of foundation stock. The remainder were disqualified for the following causes: 29% showed very slight mosaic, 10% showed mild mosaic and 7% showed more severe mosaic; 3% were disqualified for Leaf Roll and Witches Broom and 1% were weak.

Potato Production Improvement Committee

This Committee appointed by the Horticultural Advisory Board is composed of Government personnel and Potato farmers with the farmer membership being in the majority. It is charged with the responsibility of assisting and advising the Potato Industry in the Province. It acts in an advisory capacity to the Horticultural Advisory Board.

Two meetings were held during the year, the Annual Meeting in Calgary and a second meeting in July at Lethbridge. Two well attended Field Days were held, one at Edmonton and the other in the Lethbridge area. Matters of interest to Potato Growers were observed and discussed on these tours. In addition members of the Committee have prepared a well illustrated bulletin on Potato Storage Houses. Committee members spoke on the radio and through the press on timely subjects.

Potato Fertilizer Trials

In order to obtain further information with respect to the use of fertilizers on potatoes, tests were conducted on two farms in the Edmonton area and two in the Lacombe district. Results were made available to the Fertilizer Committee. These trials are to be continued next year.

Horticultural Advisory Board

This Board, appointed by the Minister of Agriculture, is composed of representatives of the Field Crops Branch, University of Alberta, Experimental Farm Service, the Science Service of the Canada Department of Agriculture and the Canadian Nurserymen's Association. The Board meets once a year and is charged with the responsibility of recommending to the Minister regarding all matters pertaining to horticulture.

Alberta Horticulture Association

The Association held its second annual meeting in Lethbridge on March 15th and 16th, 1954. Eight local Societies had accredited delegates at the Conference. In addition many members of the Lethbridge and Taber Horticultural Societies attended. Members of the Alberta Vegetable Crop Growers' Association also attended the meeting. The Conference did not have one main theme this year, rather it discussed many subjects: Is there a need for regional Horticultural Groups within the Association?; The Importance of Getting Horticultural Information out to the people who need it; How can this best be done?; The value of

this kind of organization to the producer and commercial man. Subjects such as those listed and others provided material for a spirited and informative meeting. In addition to the Annual Meeting the Executive met twice, once in Lethbridge and once in Calgary.

Other Activities

The Supervisor of Horticulture in 1954 spoke at 21 public meetings. In addition to these formal gatherings he spent from 1 to 3 days in seventeen District Agriculturists' areas assisting with Tree Planting, Farmstead Planning and checking and advising regarding Demonstration Orchards. He served as Judge at five Horticulture Bench Shows and assisted at several of the the Achievement Days of the 4-H Garden Clubs. In addition six Radio Talks and Interviews were given and fifteen press releases on timely subjects were published in the weekly release, "Farm Notes".

Nursery Inspection

In co-operation with personnel of the Federal Department of Agriculture the Supervisor of Horticulture inspected thirteen Commercial Nurseries in Alberta. This is done to ensure that Nurseries are propagating and selling plant material free of insects and disease. A check is also made as to varieties, thus ensuring the public will buy only plant material suitable for this climate. As a result of this inspection the Department publishes each year a list of recommended Nurseries. These are available free of charge from the Field Crops Branch or the District Agriculturist's office.

Report of the Live Stock Branch

W. H. T. MEAD, Live Stock Commissioner

W. C. Gordon, Live Stock Supervisor

I. A. Coles, Supervisor of Feeder Associations

A. J. Charnetski, Live Stock Supervisor

In a year of crop adversities the live stock on Alberta farms proved once again to be good insurance against cash crop losses. Farmers with live stock for sale had a steady cash income in a year when cash sales of grain were restricted by delivery quotas to a point where operating expenses were difficult to meet.

The increased consumer demand for meats experienced in the latter part of the preceding year continued through 1954 and stood out as the outstanding feature in maintaining live stock prices.

The anticipated increase in swine marketings during the late months of 1954 did not reach the figures estimated. Only about 15,000 more hogs were marketed in 1954 than in 1953. However hog prices showed the greatest decrease, dropping from a high of around \$35.00 per cwt for A grade hogs in May and June to a low of \$22.50 in November and recovering to about \$24.00-\$25.00 in December, Edmonton Yard prices.

Cattle prices remained fairly steady with good steers ranging from \$16.50 in January to \$19.00 in July and August and \$18.00 at year end with choice steers correspondingly higher.

The lamb market showed uncertainty and weakness after August, due somewhat to the threat of importation of lamb from Australia and New Zealand, and the reaction of lamb feeders to that threat. Wool prices remained at a satisfactory level and sheep production was generally profitable.

Production conditions were generally good with an abundance of grass and feed grains in most areas. Winter feed supplies were below normal in some northern and western areas due to abnormal wet weather in haying and harvest time. Feed grains in some areas are of poor quality.

Mr. Jos. J. Kallal, a former student of the Vermilion School of Agriculture, with wide practical experience in cattle breeding and feeding, joined the staff of this Branch on April 1st, to fill the position formerly held by the late James Mitchell.

CATTLE

Cattle came through the winter of 1953-54 in good condition. However, due to the late spring, feed shortages were evident in a number of districts and some loss of condition resulted.

Spring calf losses were heavier than normal, especially under range conditions, with snow and below zero temperatures in April.

Alberta's cattle population reached an all time high in 1954. Marketings at public stock yards and packing plants increased

by 19.7% over 1953. Prices for top slaughter cattle strengthened following a slight weakness at the beginning of the year and remained satisfactory throughout the balance of the year.

Fodder supplies at the end of 1954 were ample in most areas, but mostly of poor to fair quality.

Late crops, together with fall frosts resulted in low quality feed grains in many districts and a shortage in some areas, which will result in smaller gains for feedlot cattle in some cattle feeding areas.

The trend toward decentralization of selling, which started with the Community Auction Sales, was continued. The present trend is toward more private auction yards, holding regular weekly sales. The bulk of live stock going through such sales are feeder grade.

There was also more decentralization in the sale of pure bred live stock. Many pure bred breeders held private auction sales and many more combined with two or three other breeders in holding a joint sale. These were mostly production sales of females, although some breeders included an offering of bulls as well.

At the tenth annual Gallinger sale of Shorthorn bulls, 31 head averaged \$993.55. The top sale price of \$5,000.00 was paid by Dr. J. Shackelford, Virginia, U.S.A., for "Killearn Cyril 19th".

At the 54th Annual Calgary Bull Sale a total of 1,059 head brought an average price of \$497.01. This was down from an average of \$595.08 for 1,135 bulls in 1953. This downward trend of prices held for most of the early sales but a few of the later sales such as Lethbridge and Lacombe were equal to or stronger than the previous year.

At the Calgary sale C. O. Dench, L. W. Bond, and J. H. Hehr, Calgary, combined on the purchase at \$5,300.00 of the Hereford bull "Paladin Domino JHR 2nd"—356738—bred by C. E. Jones, Balzac. The Shorthorn bull "Melbar Max Eminent"—339677—bred by William Melnyk and Sons, Chipman, sold at \$2,300.00 to W. N. Graburn, Okotoks. The Aberdeen Angus bull "Eileenmere of Old Hermitage 7th"—122756—bred by Old Hermitage Farm, Edmonton, sold for \$1,975.00 to Alfred Menke, Signal, Montana, U.S.A.

The Edmonton Exhibition Association sponsored the second Annual Futurity Show in conjunction with the bull sale in March. The interbreed grand champion bull was "Melbar Max Magistrate" owned by Wm. Melnyk and Sons, Chipman, and the interbreed grand champion female was "Barbara E. of Old Hermitage" owned by Old Hermitage Farm, Edmonton.

Pure bred breeders sold 2,674 bulls through consignment sales during 1954. New sales were inaugurated at Olds, Stettler and Medicine Hat. Lacombe also held an early sale of Hereford bulls in addition to their regular three breed sale in June.

AUCTION SALES OF PURE BRED CATTLE

	1952		1953		1954	
	No. Sold	Av. Price	No. Sold	Av. Price	No. Sold	Av. Price
Calgary Bull Sale:						
Shorthorn	175	\$536.40	165	\$475.18	157	\$432.04
Aberdeen Angus	92	698.75	152	443.55	148	378.34
Hereford	589	770.06	818	647.43	754	533.83
Total all breeds	856	\$714.63	1135	\$595.08	1059	\$497.01

ANNUAL REPORT, 1954

35

	1952		1953		1954	
	No. Sold	Av. Price	No. Sold	Av. Price	No. Sold	Av. Price
Edmonton Bull Sale:						
Shorthorn	75	\$466.27	82	\$404.93	100	\$368.55
Aberdeen Angus	14	640.00	36	337.36	40	344.25
Hereford	124	618.94	149	554.53	215	450.68
Total all breeds	213	\$563.94	267	\$479.30	355	\$415.55

	1952		1953		1954	
	No. Sold	Av. Price	No. Sold	Av. Price	No. Sold	Av. Price
Lacombe Bull Sale:						
Shorthorn	123	\$332.90	138	\$311.78	121	\$228.72
Aberdeen Angus	148	368.46	134	342.28	99	316.16
Hereford	235	545.04	427	344.96	200	436.52
Total all breeds	506	\$442.00	699	\$337.90	420	\$348.28
April Hereford Sale					129	\$358.00

	1952		1953		1954	
	No. Sold	Av. Price	No. Sold	Av. Price	No. Sold	Av. Price
Lloydminster Bull Sale:						
Shorthorn	50	\$344.60	37	\$347.16	37	\$306.00
Aberdeen Angus	1	525.00	1	320.00	3	320.00
Hereford	86	520.29	88	504.82	127	370.00
Total all breeds	137	\$456.20	126	\$457.05	167	\$354.92

	1952		1953		1954	
	No. Sold	Av. Price	No. Sold	Av. Price	No. Sold	Av. Price
Camrose Bull Sale:						
Shorthorn	22	\$250.23	27	\$263.15	30	\$202.00
Aberdeen Angus			2	210.00	1	155.00
Hereford	27	420.00	38	289.07	27	239.26
Total all breeds	49	\$343.78	67	\$276.27	58	\$218.53

	1952		1953		1954	
	No. Sold	Av. Price	No. Sold	Av. Price	No. Sold	Av. Price
Lethbridge Bull Sale:						
Shorthorn	2	\$312.50	18	\$322.77		\$
Aberdeen Angus	2	390.00	9	227.77	7	374.28
Hereford	59	523.00	98	492.90	99	436.66
Total all breeds	63	\$513.57	125	\$449.32	106	\$432.55

	1952		1953		1954	
	No. Sold	Av. Price	No. Sold	Av. Price	No. Sold	Av. Price
Fall Sale						
Shorthorn	6	\$435.00	10	\$224.50		\$
Aberdeen Angus	1	400.00	2	207.50		
Hereford	233	418.73	196	315.61	98	317.70
Total all breeds	240	\$417.56	218	\$296.00	98	\$317.70

	1953		1954	
	No. Sold	Av. Price	No. Sold	Av. Price
Vermilion Bull Sale:				
Shorthorn	13	\$220.80	8	\$175.00
Aberdeen Angus	11	201.80	7	147.00
Hereford	27	221.40	19	194.00
Total all breeds	51	\$213.04	34	\$179.85

	1953		1954	
	No. Sold	Av. Price	No. Sold	Av. Price
St. Paul Bull Sale:				
Shorthorn	5	\$225.00	3	\$140.00
Aberdeen Angus	3	245.00	3	117.00
Hereford	11	288.00	12	192.00
Total all breeds	19	\$264.00	18	\$170.83

	1953		1954	
	No. Sold	Av. Price	No. Sold	Av. Price
Fairview Bull Sale:				
Shorthorn	16	\$385.94	20	\$270.00
Aberdeen Angus	2	280.00		
Hereford	25	322.00	31	301.62
Total all breeds	43	\$344.19	51	\$289.21
			No. Sold	Av. Price
Olds Bull Sale:				
Hereford			80	\$406.00
			No. Sold	Av. Price
Medicine Hat Bull Sale:				
Hereford			57	\$222.10
Aberdeen Angus			3	150.00
Total all breeds			60	\$218.50
			No. Sold	Av. Price
Stettler Bull Sale:				
Shorthorn			10	\$315.00
Aberdeen Angus			11	346.00
Hereford			18	330.00
Total all breeds			39	\$333.00

The June survey of the number of cattle on Alberta farms for the past five years shows as follows:

Year	No. of Head
1950	1,442,900
1951	1,563,000
1952	1,754,000
1953	1,910,000
1954	2,010,000

The largest increase in number for any one class of cattle was in beef cows two years and over which accounted for over one-third of the total increase.

The official reports of the Canada Department of Agriculture show for Alberta the following cattle and calf marketings and total value for 1950 to 1954 (inclusive):

Year	No of Cattle	Value	No. of Calves	Value
1950	473,354	\$ 92,458,000 00	137,721	\$12,000,000.00
1951	385,660	102,007,070 00	92,649	11,320,781.00
1952	377,032	71,116,000 00	82,223	6,506,000 00
1953	463,424	67,020,000 00	107,107	6,322,000.00
1954	552,296	74,245,151 00	123,732	6,133,395 00

CATTLE AND CALF SHIPMENTS OUT OF THE PROVINCE

	1950	1951	1952	1953	1954
British Columbia	89,258	64,869	78,570	95,811	92,560
Saskatchewan	4,249	4,175	1,800	1,865	1,223
Manitoba	19,623	14,047	8,942	16,833	20,558
Ontario	48,908	44,398	16,525	53,931	69,623
Quebec	20,889	13,841	15,122	35,231	5,393
Nova Scotia	28	6	60		29
New Brunswick	22				
U.S.A.	115,060	63,287	2,896	15,779	34,954
Newfoundland					
Prince Edward Island		21			40
	298,037	204,644	153,915	219,450	224,380

THE CATTLE IMPROVEMENT POLICY

There were no changes in the regulations governing the Policy outlined in the 1953 report.

During the year 630 bulls were placed. These were by breeds:

363 Hereford, 168 Shorthorn, 71 Aberdeen Angus, 7 Red Poll, 17 Holstein, 3 Ayrshire and 1 Jersey.

Three hundred and sixty-six bulls were purchased by applicants on the basis of appraisal on the breeder's premises. Two hundred and sixty-four bulls were selected by the Department and shipped prepaid to applicants.

The following table shows the placement of bulls for the years 1950 to 1954 inclusive:

1950	249
1951	309
1952	526
1953	677
1954	630

LIVE STOCK LISTING BUREAU

This Policy makes provision for placing pure bred breeding stock, male or female, with pure bred breeders and others not eligible to come under the Live Stock Improvement Policy. There is no financial assistance either by way of reduced purchase price or prepayment of freight. During 1954, six bulls and thirty-two females were placed.

DAIRY HEIFER CALF POLICY

This policy is designed to assist 4H dairy clubs in acquiring suitable heifer calves for club work. Upon receipt of orders from clubs this Branch arranges to pick up surplus heifer calves from the Edmonton milk shed area and ship them to club members, express prepaid. During the year 238 calves were picked up and delivered to the various clubs. This was an increase of 77 calves over the previous year.

Calves were purchased at a standard price of \$32.50 each, at about one week of age. Club members pay the purchase price of calves. This policy has made possible the successful operation of dairy clubs in many districts where they would be unable to obtain calves locally.

ARTIFICIAL INSEMINATION

Artificial breeding service from Holstein bulls was continued from the School of Agriculture breeding centre at Olds. Service was made available to pure bred breeders of Holstein cattle at various points in the Province and to grade breeders only in the immediate vicinity of Olds. Some difficulty was experienced in providing continuous service, due to the limited number of bulls used and the limited demand.

A continuation of this study has revealed an important difficulty in obtaining bulls of sufficiently high genetic excellence to establish general improvement over a considerable number of pure bred herds.

The following table shows the volume of service to grade herds and pure bred herds during the year.

Grade Herds	1951	1952	1953	1954
No. of herds	51	51	58	61
No. of cows bred	210	200	195	310
Pure Bred Herds				
No. of herds	119	96	97	87
No. of cows	436	411	457	367

At December 1st, 1953 breeding service was started in the Edmonton area by the Edmonton Artificial Breeding Association. Semen for this service has been obtained by air express from the Milner Unit in British Columbia. This Department has paid for the cost of semen, namely 50 cents per service. During 1954 this Association bred 2,819 cows with first service. Total services were 3,787, making total assistance from this Department of \$1,892.50. In December the Association found it necessary to hire the third technician. Based on the number of first services and the number of second services over the eleven month period the conception rate in this Association is very satisfactory.

COMMUNITY AUCTION SALES

Co-operative community sales of range cattle operated in the principal ranching areas proved equally as popular as in past years. The Community Auction Sales Association with headquarters at Pincher Creek, held approximately 50 sales at Pincher Creek, Lundbreck, Pakowki, Parkbend, Fort Macleod, Whiskey Gap, Cardston, Warner and Claresholm. The Walsh Association held one spring sale and four fall sales at Walsh. The Lea Park and Cadogan Associations held one sale each and several sales of fat cattle were held at Brooks, sponsored by the Bow Slope Shipping Association and Eastern Irrigation District.

Privately operated auction sales continued operation at Red Deer, Olds, Wetaskiwin, Camrose, Stettler, Ponoka, Cremona and Mannville, with new sales starting at Westlock, Coronation, Kitscoty, Barrhead and Newbrook. These sales mainly cater to local farmer trade. Exceptions to these are Olds and Red Deer where volume is sufficient to attract trader buyers.

Practically all cattle sold on the Edmonton, Calgary and Lethbridge stock yards were sold by auction. This method of selling is now firmly established and is most popular with producers.

During the year 37,355 head of cattle were inspected through co-operative community sales, compared to 30,266 head inspected through those sales in 1953.

LIVE STOCK FEEDER ASSOCIATIONS

The Feeder Associations Guarantee Act was enacted in 1937. The object of the Act was to provide a means whereby farmers wishing to fatten cattle or sheep for market might secure the credit necessary to purchase feeder live stock.

This Act is a two-way policy in that farmers are rendered assistance to market their feed grains and forage crops through live stock usually at increased values; while live stock growers have the additional market for their feeder live stock which these feeding operations provide.

The first feeding operations under this Act were during the 1938-39 season. From the 1938-39 season to the 1953-54 season (inclusive) a total credit of \$15,826,401.75 was utilized by 5,539 Association members who fed 160,930 cattle and 422,790 sheep.

During the 1953-54 feeding season, twenty-three associations operating under The Feeder Associations Guarantee Act had 428

members who fed 9,538 cattle and 8,250 sheep, utilizing a credit of \$919,327.06.

Most cattle and lamb feeders received good profits from the season's feeding operations. Cattle feeders received a particularly satisfactory spread between cost of finished cattle and cost of feeders.

All loans under the 1953-54 guarantees have been repaid in full.

Outstanding loans under the 1952-53 guarantees amounted to \$4,062.85 as at September 1st, 1954. This amount was owing by the Wainwright-Edgerton-Chauvin Association. This Association did not qualify under government requirements for a guarantee in 1953-54 because of its indebtedness from the 1952-53 season.

Outstanding loans under the 1951-52 guarantees at September 1st, 1954 totalled \$95,779.07, (including interest). These outstanding loans were a result of market conditions following the diagnosis of Foot and Mouth disease in Saskatchewan in February 1952, which caused severe losses to most feeders and necessitated following a policy whereby Associations with outstanding loans under the 1951-52 guarantees could continue to operate under certain conditions and therefore would be able to reduce these outstanding loans by continued feeding operations.

As a result of the above Policy the total loans outstanding under the 1951-52 guarantee amounted to \$493,827.09 as at September 1st, 1952 and were reduced to \$95,779.07 as at September 1st, 1954. In the same period the number of Associations with outstanding loans under the 1951-52 guarantee were reduced from 25 to 15.

FEEDER ASSOCIATION OPERATIONS 1953-54 SEASON

Association	Members	Cattle	Sheep	Amount of Credit
ANDREW-WILLINGDON Feeders' Ass'n., Ltd., Andrew	2	35		\$ 2,498.54
BATTLE RIVER Feeder's Ass'n., Ltd., Camrose ..	36	1,004		75,201.04
BOWDEN FEEDER'S Ass'n., Ltd., Innisfail	9	267		27,994.65
BOW VALLEY Live Stock Feeders' Ass'n., Ltd., Brooks	37	917	1,271	98,738.64
CARSTAIRS Live Stock Feeders' Ass'n., Ltd., Carstairs	23	580		51,481.42
CENTRAL ALBERTA Live Stock Feeders' Ass'n., Ltd., Lacombe	17	476		37,163.80
EAGLE HILL Live Stock Feeders' Ass'n., Ltd., Olds	22	509	165	43,652.12
EAST BOW VALLEY Live Stock Feeders' Ass'n., Ltd., Brooks	51	1,036	591	98,923.54
EAST CENTRAL Feeders' Ass'n., Ltd., Lacombe	22	672		60,261.51
EAST OLDS Live Stock Feeders' Ass'n., Ltd., Olds	14	306		27,080.17
GARDEN CITY Feeders' Ass'n., Ltd., Magrath ..	10	111	1,617	30,268.29
HORSE SHOE LAKE Feeders' Ass'n., Ltd., Innis- fail	8	192		19,983.90
KNEEHILL VALLEY Feeders' Ass'n., Ltd., Innis- fail	16	366		34,005.52
MANNVILLE Live Stock Feeders' Ass'n., Ltd., Mannville	26	557		39,911.98
MARWAYNE Live Stock Feeders' Ass'n., Ltd., Marwayne	16	300		27,175.15
PONOKA Feeders' Ass'n., Ltd., Ponoka	25	438	33	39,947.07
RAVEN Feeders' Ass'n., Ltd., Innisfail ..	8	130		12,205.54
RAYMOND-MAGRATH Feeders' Ass'n., Ltd., Magrath	8	208	381	22,970.55
SOUTH SLOPE Live Stock Feeders' Ass'n., Ltd., Brooks	40	783	2,955	99,761.46
TABER Feeders' Ass'n., Ltd., Taber	11	178	931	27,364.58
TILLEY-ROLLING HILLS Live Stock Feeders' Ass'n., Ltd., Brooks	12	132	306	19,861.51
VERMILION & DISTRICT Live Stock Feeders' Ass'n., Ltd., Vermilion	14	261		20,717.35
WESTLOCK Feeders' Ass'n., Ltd., Westlock	1	30		2,158.73
	428	9,538	8,250	\$919,327.06

FEEDER ASSOCIATION OPERATIONS 1938-39 TO 1953-54

Feeding Season	Associations	Members	Cattle	Sheep	Credit
1938-39	6	180	9,239	19,187	\$ 368,421.45
1939-40	12	351	16,248	20,287	775,125.21
1940-41	12	451	17,056	37,863	954,489.50
1941-42	15	408	14,945	41,157	1,117,186.08
1942-43	17	437	13,279	31,452	1,092,768.43
1943-44	16	395	11,639	53,768	1,191,641.50
1944-45	15	257	7,968	46,537	834,347.71
1945-46	15	319	9,556	60,845	1,098,291.77
1946-47	13	245	7,057	37,036	729,447.90
1947-48	13	239	8,088	26,241	859,922.29
1948-49	13	212	4,784	13,020	837,732.21
1949-50	10	237	4,978	8,948	622,759.22
1950-51	11	291	5,615	4,381	917,400.70
1951-52	26	642	11,236	6,750	2,328,596.59
1952-53	25	447	9,704	7,068	1,178,834.14
1953-54	23	428	9,538	8,250	919,327.06
		5,539	160,930	422,790	\$15,826,401.75

SHEEP AND SWINE

Swine

Swine production again proved profitable during most of the year. Prices remained strong for the first eight months of the year. In anticipation of a heavy fall run of market hogs, price break came earlier than expected. It recovered for a short time but again receded to around \$24.00 per cwt. for A Grade. The various marketing agencies deserve credit for their efforts in finding outside markets—both for the live hogs and for the dressed pork products. It must be admitted here that the producers themselves are apparently failing to recognize the importance of quality in market hogs, which would greatly assist in the marketing of the products at higher values.

Organized farm groups could be service to their members by stressing the importance of quality in relationship to larger marketing possibilities at home and abroad.

During the year, Canada exported mainly to the United States over 23,000 live hogs and over 50,000,000 pounds of dressed pork; or the equivalent total of over 630,000 live hogs.

Prices for Grade A hogs at Edmonton Yards ranged from a high of \$35.75 in March to a low of \$22.50 in October. The quality of Alberta hogs again deteriorated this year. Only 18 per cent of the total marketed graded A Grade carcasses and 16 per cent graded C.

Larger discounts on the off-grade hogs became effective in April. The new discounts are as follows:

GRADE	DISCOUNT
A Grade	Basic Price
B1 Grade	\$1.00 per cwt.
B2 Grade	1.25 " "
B3 Grade	1.60 " "
C Grade	3.00 " "
Heavy Grade	3.25 " "
Extra Heavy Grade	4.75 " "

Because of very limited demand for over-fat pork products, larger discounts were apparently necessary to more positively discourage the production of less desirable hogs from quality standpoint.

The demand for pure bred breeding stock was very good throughout the year at very attractive prices. Calgary Fall Sales averaged \$111.03 for boars and \$84.31 for gilts; while Edmonton Fall Sale boars averaged \$79.52 and gilts \$63.44. Calgary high for Yorkshire boars was \$310.00 and for gilts \$205.00; Tamworth

boars \$130.00 and gilts \$110.00. Edmonton high for Yorkshire boars was \$360.00 and for gilts, \$250.00. For Tamworth boars \$150.00 and \$80.00 for the gilts. Edmonton experienced an outstanding Spring Swine Sale. The top Yorkshire gilt sold by J. M. Henderson of Red Deer, to John Weleschuk of Warspite for \$500.00. Yorkshire boars averaged \$154.81; sows \$184.86; Tamworth boars \$136.11 and Tamworth sows \$159.37.

During the last week of July, four Swine Field Days were held in the Peace River Area. Types of breeding stock and of market hogs were demonstrated and correlated to market requirements. Those present showed considerable interest and much constructive discussion took place. Dr. E. E. Ballantyne attended all meetings and demonstrated by means of preserved specimens, various swine diseases, and practical methods of dealing with each one.

Swine Refresher Courses were arranged for District Agriculturists. One was held at the Union Packing Plant at Calgary and another at Swift's Packing Plant in Edmonton. Correlation of the different types and grades of live hogs to carcass quality and carcass grades processed from the same hogs was made by especially trained personnel of the Dominion Marketing Services. Also, amount of trim required on various grades of over-fat carcasses was observed and discussed on the pork cutting floor under actual packing plant operations. Dominion Production Marketing, and the Lacombe Experimental Farm personnel, as well as key men in packing plants concerned, co-operated as instructors and demonstrators.

THE SWINE IMPROVEMENT POLICY

The Swine Improvement Policy operated normally without any changes in its main structure. Eligible farmers obtained boars of bacon breeds at cost with express shipping charges prepaid to their nearest shipping points. Those not qualified for boars under the Policy and those purchasing gilts obtained their requirements under the Live Stock Listing Bureau.

The following table indicates pure bred swine placements made during the year 1949 to 1954 inclusive:

	Live Stock Listing Gilts	Boars	Impro. Policy Boars	Total Boars
1949	19	20	145	165
1950	8	4	119	123
1951	5	5	129	134
1952	15	6	135	141
1953	6	16	107	123
1954	16	24	136	160

The 1954 totals include 16 Tamworth boars and 2 Tamworth gilts.

ALBERTA SWINE POPULATION—JUNE SURVEY

1950	809,700
1951	1,088,000
1952	1,170,000
1953	1,180,000
1954	1,408,000

DEPARTMENT OF AGRICULTURE

ALBERTA HOG GRADINGS FOR YEARS 1950 TO 1954 INCLUSIVE

	1950	1951	1952	1953	1954
	%	%	%	%	%
Grade A	25.00	25.12	21.43	19.92	18.22
Grade B	56.32	B1 43.04 B2 3.77 B3 7.12	42.86 3.52 7.87	44.70 4.00 6.80	44.26 3.80 6.31
Grade C	6.28	6.69	8.81	11.90	13.88
Light	1.40	1.06	1.18	1.20	1.25
Grade D	0.56	0.51	0.48	0.05	.56
Heavy	2.03	3.00	3.74	3.00	2.79
Extra Heavy	1.77	2.56	3.32	2.40	2.26
Injured	0.04	0.05	0.04		.04
Rgl.	0.51	0.54	0.53	0.05	.54
Stags	0.45	0.49	0.41	0.05	.47
Sows	5.64	6.05	5.81	4.60	5.62

EDMONTON SPRING SWINE SALE

	1952		1953		1954	
	No. Sold	Av. Price	No. Sold	Av. Price	No. Sold	Av. Price
Yorkshire gilts	108	\$ 82.13	72	\$ 128.68	72	\$ 184.86
Tamworth gilts	8	102.50	7	109.29	24	159.37
Yorkshire boars	51	70.69	41	138.90	53	154.81
Tamworth boars	13	71.54	7	100.35	9	136.11

EDMONTON FALL SWINE SALE

	1952		1953		1954	
	No. Sold	Av. Price	No. Sold	Av. Price	No. Sold	Av. Price
Yorkshire sows	127	\$ 65.30	162	\$ 91.09	135	\$ 64.98
Tamworth sows	9	72.22	10	89.50	11	61.25
Yorkshire boars	115	78.06	136	104.61	109	80.48
Tamworth boars	19	87.60	24	121.54	16	72.96

CALGARY SPRING SALE

	1953		1954	
	No. Sold	Av. Price	No. Sold	Av. Price
Yorkshire bred sows	23	\$ 113.81	31	\$ 145.49
Tamworth bred sows			8	167.50
Yorkshire open gilt	26	81.73	29	106.03
Tamworth open gilt			2	125.00
Berkshire open gilt			3	130.00
Yorkshire boars	18	112.36	19	119.61
Tamworth boars	3	90.83	6	175.00
SWINE TOTAL	70	\$ 100.54	98	\$ 131.50

CALGARY FALL SWINE SUMMARY

	1952		1953		1954	
	No. Sold	Av. Price	No. Sold	Av. Price	No. Sold	Av. Price
SOWS:						
York. Oct.-Apr.	62	\$ 67.74	87	\$ 83.45	57	\$ 81.58
York. Prev. Oct.	8	75.31	1	200.00	8	113.43
Tam. Oct.-Apr.	5	53.50	6	105.83	9	80.31
Berk. Fem.	2	52.50				
Female Total	77	\$ 67.21	94	\$ 86.12	73	\$ 84.93
BOARS:						
York. Oct.-Apr.	54	\$ 79.81	71	\$ 114.58	69	\$ 115.75
York. Prev. Oct.	2	67.50	2	165.00	2	135.00
Tam. Oct.-Apr.	13	73.84	12	167.92	16	95.31
Tam. Prev. Oct.	1	60.00			1	90.00
Berk. Boar	1	75.00	4	161.25	2	60.00
Boar Total	71	\$ 78.03	89	\$ 125.00	90	\$ 111.03
SWINE TOTAL	148	\$ 72.40	183	\$ 105.03	163	\$ 99.34

SUMMARY OF ALBERTA HOG CARCASSES GRADED, 1950-1954

Year	"A"	"B1"	"B2"	"B3"	"C"	"D"	Light	Heavy	Extra Heavy	Injured	Ridg- lings	Stags	Sows	Total No.	Total Sales Value
1950	240,179	443,351	47,375	50,380	60,294	5,362	13,436	18,535	16,958	370	4,856	4,374	54,138	960,608	\$42,305,176.00
1951	240,605	412,267	36,098	68,194	64,057	4,888	10,121	28,703	24,558	446	5,188	4,727	57,921	957,773	49,411,433.00
1952	291,912	583,855	47,949	107,172	119,983	6,547	16,031	50,904	45,262	522	7,248	5,570	79,187	1,362,142	52,674,108.00
1953	285,359	640,296	56,566	97,929	169,898	7,298	17,075	43,138	34,007	257	7,728	6,821	66,066	1,432,438	66,049,716.18
1954	266,366	647,052	55,523	92,205	202,913	8,151	18,217	40,754	33,003	544	7,882	6,950	82,210	1,461,770	67,372,979.30

Sheep

Sheep are gradually regaining their rightful place on farms throughout the Province. Farm flocks are becoming more numerous and larger, in areas to the west of the Calgary and Edmonton line. A number of inquiries were received from outside the Province regarding suitability of various parts of Alberta for sheep production. The excellent program in the control of predatory animals, where greater use of poisoned tallow pellets and the 1080 poison is being made, adds considerable confidence to this phase of live stock production.

There is evidence of more commercial sheep men becoming conscious of too many black fibres showing up in black-pointed sheep. This factor became particularly noticeable at many Sheep Shearing Schools during the past spring; consequently there were many requests for white-faced rams. It is most desirable that a more suitable, general utility, white-faced breed of sheep be developed—this alone would add considerably to sheep expansion in this Province.

A special effort is indicated for greater sheep expansion in areas similar to Rocky Mountain House, where due to climatic conditions, good quality grain cannot be grown, but grass and legume growth is excellent, which can be used to distinct advantage for grazing and wintering sheep flocks.

Popularity of feed-lot lambs continues to be good. Feeder lambs went into feedlots at \$17.00 to \$17.50 per cwt., which was at practical par with the price for good, fat market lambs. It is estimated that there are over 52,000 lambs in feedlots this year.

Market lambs were selling at a low of \$16.00 per cwt. in October and at a high of \$24.00 per cwt. in July, basis "Good" at Edmonton yards. These lower prices are, no doubt, due to dressed lamb importation from other countries.

Due to poorer quality feed during the winter of 1953-54, wool clip was not as good as in 1953. Popular opinion that sheep can be wintered on any kind of low quality feed is not compatible with wool yield or with the weaning percentage of lamb crops. Better fed flocks have yielded much higher wool clips and stronger lamb crops. Statistics indicated that fleeces averaged 7.8 pounds of wool in 1954, however, random sampling of domestic and range flocks during Sheep Shearing Schools does not support this high figure. Domestic wool prices averaged about 38 cents per pound. Range wool averaged about 44 cents.

The Abee 4H sheep club again completed a very successful year. There are three other sheep clubs formed in the Province. This Branch now has four Suffolk and one Southdown rams on loan to 4H Clubs. This will provide for greater uniformity in market lambs at Achievement Days.

Fall Sheep Sales were not really bad, considering the unfavourable situation from the standpoint of purebred sheep exports to the United States. The Calgary Fall Sale was fairly good and consistent with quality offered. The ram average was \$65.03 compared to \$65.00 average in 1953. Ewes averaged \$51.61, compared to \$49.27 in 1953. The Edmonton Fall Sheep Sale was quite good on better quality animals but disappointing on the plainer offerings. It also lacked in buyer attendance. Edmonton rams

Sheep Shearing and Management Schools continue to be very popular. Results of these schools are already evident in the improvement of flock management and in interest that younger men take in the shearing of their own and the neighboring flocks. Several districts where schools were not previously held already requested to be placed on the list for 1955 schools. Shearing Field Days in 1954 were held during the latter part of May and early June at Okotoks, Cardston, Brooks, Kevisville, Buck Lake, Winfield, (Tofield rained out), Sangudo and Sugden. Heavy rains during the period of these schools made travelling and shearing conditions difficult but even so they were very well attended. As in the previous year, the University of Alberta and Dominion Production Services co-operated throughout in this program.

Along with other policies, the Live Stock Branch also operated a Sheep Improvement Policy which is designed to assist Alberta sheep producers in obtaining suitable rams at cost with shipping charges paid by the Department. Those who do not qualify obtain rams and ewes under the Live Stock Listing Bureau which does not provide for prepayment of shipping charges.

	Live Stock Listing Bureau	Impr. Policy	Total
	Ewes	Rams	Rams
1951		1	53
1952	36	2	40
1953	33	2	30
1954	4	5	*40

CALGARY SUMMER SALE OF STUD RAMS AND EWES

No Hampshire offered in this sale.

No Hampshire offered in this sale

DEPARTMENT OF AGRICULTURE

CALGARY PURE BRED SHEEP—FALL SALE

	1952		1953		1954	
	No. Sold	Av. Price	No. Sold	Av. Price	No. Sold	Av. Price
Hampshire Ewes (1 Yr.)	1	\$100.00	15	\$ 43.30	4	\$ 37.50
Hampshire Ewes (L)	5	53.00	1	70.00	4	37.50
Suffolk Ewes (1 Yr.)	41	62.56	53	54.15	35	50.46
Suffolk Ewes (L)	41	55.00	66	47.54	24	65.88
Southdown Ewes (1 Yr.)	8	34.06	5	36.00	4	34.00
Cheviot Ewes (1 Yr.)	26	35.96	1	50.00	.	.
No. Country Cheviots	1	155.00	1	35.00	.	.
Cheviot Ewes (L)	.	.	10	28.50	7	22.14
Corriedale Ewes (1 Yr.)	.	.	9	72.78	8	64.65
Southdown Ewes (L)	.	.	.	.	3	23.66
Corriedale Ewes (L)	.	.	.	.	3	74.17
	123	\$ 53.23	161	\$ 49.27	92	\$ 51.61
Hampshire Rams (1 Yr.)	17	\$ 64.56	12	\$ 71.88	9	\$ 56.39
Hampshire Rams (L)	9	82.78	29	57.84	14	50.18
Suffolk Rams (1 Yr.)	42	53.21	30	61.75	20	88.25
Suffolk Rams (L)	53	60.09	83	67.53	70	71.03
Corriedale Rams (1 Yr.)	5	81.00	9	111.94	18	63.05
Cheviot Rams (1 Yr.)	11	37.27	10	47.75	7	36.07
Southdown Rams (1 Yr.)	.	.	2	47.50	6	34.17
Southdown Rams (L)	3	38.33	1	30.00	.	.
No. Country Cheviots (1 Yr.)	8	59.06	9	57.50	6	76.67
Cheviot Rams (L)	.	.	2	35.00	6	32.50
No. Country Cheviot Rams (L)	.	.	1	50.00	2	66.25
Corriedale Rams (L)	.	.	3	56.67	5	54.50
Total	148	\$ 58.55	191	\$ 65.00	163	\$ 65.03
Grade Ewes	50	\$ 21.88	93	\$ 15.53	125	\$ 17.46

EDMONTON PURE BRED SHEEP—FALL SALE

	1952		1953		1954	
	No. Sold	Av. Price	No. Sold	Av. Price	No. Sold	Av. Price
Suffolk Ewes	51	\$ 47.44	46	\$ 54.07	39	\$ 30.89
Oxford Ewes	2	20.00	.	.	3	20.83
Cheviot Ewes	3	41.60	3	29.16	9	31.11
Hampshire Ewes	14	27.50	1	35.00	.	.
	70	\$ 42.43	50	\$ 52.20	51	\$ 30.34
Cheviot Rams	6	\$ 52.89	7	\$ 48.92	11	\$ 38.63
Suffolk Rams	76	54.87	75	48.35	66	46.89
Oxford Rams	6	55.83	1	35.00	3	28.33
Southdown Rams	2	30.00	2	52.50	2	35.00
Hampshire Rams	16	51.79	19	51.05	10	52.50
Total	106	\$ 53.86	104	\$ 47.16	92	\$ 45.65

ALBERTA SHEEP POPULATION—JUNE SURVEY

1947	613,800	1951	330,500
1948	448,600	1952	387,000
1949	441,800	1953	432,000
1950	414,500	1954	528,000

ALBERTA SHEEP AND LAMB MARKETING

	LAMBS				SHEEP	
	Good	Common	Bucks	Feeders	Good	Common
1952	93,451	15,615	930	7,141	8,127	3,347
1953	81,108	10,287	1,813	5,994	5,106	2,050
1954	91,071	11,102	622	8,646	3,436	2,536

Outward Movement to:	Public Stock Yards	Packing Plants	Direct on Export	Country Points in other Prov.	TOTAL	TOTAL INWARD MOVEMENT
1952	43,749	84,862	87	4,388	133,086	14,848
1953	33,101	73,257	822	5,343	112,523	14,296
1954	37,230	80,183	46	4,766	122,225	13,955

ALBERTA COMMERCIAL SHEEP MARKETING AND VALUES

Year	Stock Yards	Plants	Direct Export	To Country Points	Total	Value
1949	45,941	91,177	28,032	7,162	172,312	\$2,969,056.98
1950	36,520	59,283	68,323	4,051	168,177	3,745,302.00
1951	36,062	51,658	5,044	4,160	96,924	2,674,386.00
1952	43,749	84,862	87	4,388	133,086	2,551,258.62
1953	33,101	73,257	822	5,343	112,523	1,912,891.00
1954	37,230	80,183	46	4,766	122,225	1,904,956.75

EXPORT OF PURE BRED SHEEP FROM ALBERTA TO U.S.A.

Year	No. of Head
1951	700
1952	44
1953	316
1954	192

CANADIAN EXPORT OF SHEEP AND LAMBS

	To United States		Total Export	
	No.	Value	No.	Value
1950	87,140	\$1,939,558	87,648	\$1,952,132
1951	31,387	1,072,332	31,727	1,078,406
1952	357	14,323	611	20,140
1953	2,004	140,267	2,347	145,910
1954	1,798	81,901	2,402	91,732

CANADIAN EXPORT OF MUTTON AND LAMB

	To United States		Total Export	
	No.	Value	No.	Value
1950	2,665,800	\$1,346,555	2,760,700	\$1,402,215
1951	2,677,700	1,657,845	2,737,200	1,697,897
1952	11,100	4,527	46,300	30,307
1953	2,900	879	51,900	28,664
1954	23,100	9,491	53,000	28,225

CANADIAN IMPORTS OF MUTTON AND LAMB

Imported from:	(Pounds)				
	1950	1951	1952	1953	1954
United Kingdom	3,985	7,660	2,270	5,900	5,356
United States	42,249	51,877	86,843	1,796,700	622,307
Australia	428,431	1,839,748	980,281	989,737	2,759,391
New Zealand	11,328	1,554,839	1,422,431	1,952,752	3,907,796
Other Countries		54,080	169,524		
Total	485,993	3,499,204	2,661,349	4,745,089	7,294,850

During the year there were increased demands on the sheep and swine improvement supervisor, Mr. A. J. Charnetski. These included assistance in selecting and culling in flocks and swine herds, judging at "B" and "C" class fairs, 4H sheep and swine achievement days, sheep management and shearing demonstrations, and preparation of material for agricultural notes and radio.

Considerable time and travelling were required to service meetings covering sheep and swine work. These discussions were illustrated by means of photo slides of live stock production methods and activities in this Province. Meetings attended by Mr. Charnetski, compared to previous years, are set out in the following table:

	No. of Meetings	Total Attendance	Average Attendance
1950	35	2,170	62
1951	34	2,909	85
1952	35	3,173	90
1953	40	1,826	45
1954	92	4,413	48

HORSES

Continued mechanization of farm operations, coupled with low value of horses, demand for meat horses and lack of interest in breeding, has resulted in further decline of the number of horses on Alberta farms.

The June 1st survey of horses on farms estimates the number at that time at 197,000 head compared to 222,000 head the previous year.

One sale was held at Calgary in April at which 411 head of light and heavy horses sold at an average price of \$85.39. Demand for light horse types was fairly brisk with 241 head making an average price of \$90.44. One hundred and sixty-nine heavy horses averaged \$78.24, with the majority being purchased by processors.

Shipment of horses out of the Province was slightly higher than in the previous year. Over one-half of the out-of-Province shipments went to the United States, mainly for slaughter. It is estimated that approximately four-fifths of the horses sent out of the Province went to slaughter. Processing plants at Edmonton and Calgary found some difficulty in maintaining a steady supply. Prices for meat horses were generally slightly higher than in the preceding year.

TORONTO ROYAL WINTER FAIR

The 1954 Toronto Royal Winter Fair was held November 12th to 20th. Twelve carloads of Alberta live stock left Calgary and Edmonton on the Canadian National Railway on November 2nd. The shipment comprised 23 horses, 38 beef breeding cattle, 33 market cattle, 13 dairy cattle, 33 sheep and 23 swine, from 51 exhibitors.

Calgary and Edmonton were assembly points with the two sections joining at Saskatoon.

The selectors appointed by the various breed associations completed their selections during September as nominations had to be in Toronto by October 9th.

Freight costs were borne seventy-five percent by the Dominion Department of Agriculture and twenty-five percent by the Provincial Department. The Alberta Department of Agriculture paid decking and feed costs in connection with the shipment.

The Live Stock exhibit took two grand championships, five reserve grand championships, seven championships and eleven reserve championships.



—Photo by Jim Rose

T. G. Hamilton's group of three Shorthorn steers sired by Pittodrie Fortune; Winners of the three steer get of sire class, 1954 Royal Winter Fair.



Presentation of Freyseng Trophy to Arthur Grenville and Harold Trentham of Morin, Alberta, joint owners of the 4 Suffolk lambs judged the best four lambs of any breed at the 1954 Royal Winter Fair, Toronto.

—Photo by Canada Pictures Ltd.

The following table shows the prizes won by Alberta:

	Horses	Cattle	Sheep	Swine	Total
Grand Champion	2				2
Reserve Grand Champion	1	2		2	5
Senior Champion	2				2
Reserve Senior Champion	1	1		2	4
Junior Champion		1			1
Reserve Junior Champion	1	3			4
Championships	2	3	2		7
Reserve Championships	2	6	1	2	11
1st Prize	8	17	6	2	33
2nd Prize	4	14	3		21
3rd Prize	5	10	6	6	26
Other Prizes	5	63	15	13	96
	33	120	33	26	212

*The Champion Suffolk ram exhibited by Grenville & Trentham was named Supreme Champion of the show in competition with other breed Champions.

Carl J. Hanson, Brightview exhibited the Grand Champion Percheron stallion and the University of Alberta the Grand and Reserve Grand Champion Percheron mares. J. A. Paul, Okotoks exhibited the Reserve Grand Champion Hereford bull; T. G. Hamilton, Innisfail the Reserve Grand Champion steer; N. J. Shopland, Rochester, the Reserve Grand Champion Yorkshire sow and W. A. Greenway & Son, Acme, the Reserve Grand Champion Tamworth boar.

The Suffolk sheep exhibit of Grenville and Trentham, Morrin, was outstanding, winning the Championship and Reserve Championship for rams and the Championship for ewes. They were also winners of the Freyseng trophy for Champion pen of four lambs in interbreed competition and the Don Head trophy for Supreme Champion ram of the show.

D. R. Buchanan, Pincher Creek, won the Championship group of five steers with an exhibit of Aberdeen Angus. In the class for "Three steer get of one sire" T. G. Hamilton was first with his Shorthorn group and A. R. Buchanan second with his Aberdeen Angus group. This was a new win for Alberta exhibitors.

The results of the six Sale of Stars held in connection with the Royal are listed in the following table:

	1953		1954	
	No. Sold	Av. Price	No. Sold	Av. Price
Shorthorn (scotch)	33	\$ 978.00	27	\$ 746.30
Hereford	53	588.00	31	581.79
Aberdeen Angus	49	803.00	33	725.76
Ayrshire	36	445.00	16	420.63
Jersey	43	625.00	32	768.44
Holstein	35	2,129.00	32	2,168.55

The Holstein bull calf Rosafe Signet, sired by A. B. C. Reflection Sovereign consigned by Dr. Hector I. Astengo, Brampton, Ontario, sold to J. J. E. McCague, Alliston, Ontario, for the record price of \$20,100.00.

THE STOCK INSPECTION ACT

With very heavy marketing of cattle it was extremely fortunate that we had another long, open fall. This permitted the normally heavy run of fall cattle to be distributed over sufficient length of time to avoid any serious gluts on the market. Marketings in recent years have tended to be more evenly distributed due largely to increased feeder activity. The tempo of marketing is speeded up due to increased movement by truck, increased feedlot feeding which results in finer selection of two way cattle, and the practise of packers holding fewer killing cattle in reserve at any one time. This increase in tempo, together with the increase in market out-

let through country sales has made it more difficult to provide inspection service and has required more travel by inspectors.

During 1954 brand inspection was carried out continuously at the Edmonton, Calgary, Lethbridge, Lloydminster and St. Boniface Stock Yards. Deputy brand inspectors carried out inspections as required in the Medicine Hat, Pincher Creek and Red Deer areas. Members of the R.C.M. Police carried out inspections at certain points where infrequent service was required, particularly on out-of-Province shipments.

Inspectors and deputy inspectors worked approximately 225 cattle sales held at points other than main stock yards. Numbers of cattle per sale ranged from 50 to 1,500 head.

A total of 779,528 inspections were made into all markets as compared to 650,793 head in 1953, for an increase of 19.7 per cent over the previous year.

Inspection of cattle going back to feedlot, cover crop and pasture, on which buyers were given brand clearance totalled 118,466 head. This made a total of all inspections of 897,994 head.

Proceeds of sale of 945 cattle were held up by inspectors at various points pending further investigation of ownership. The proceeds of sale of thirty-three cattle were forwarded to the Live Stock Commissioner's office for final determination of ownership.

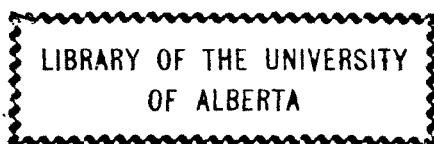
There was indication, particularly during the later months, of some increase in theft activities. This applied to theft of hogs and sheep as well as cattle. Of the considerable number of convictions obtained, all but one were for offences detected in the country which indicates that brand inspection at all main markets tends to keep those markets comparatively free of the delivery of stolen cattle.

It is with regret that we acknowledge the resignation of Mr. James (Barney) Crockett, effective December 31, 1954. Mr. Crockett inspected the Medicine Hat area for a number of years as a special constable of the R.C.M. Police and in later years as a deputy inspector of this Department. His resignation adds to the growing list of pioneer cattlemen who are passing from active service.

Close and effective co-operation has been maintained between all brand inspectors and the R.C.M. Police.

Butchers and Hide Dealer licenses issued totalled 392. This represented a reduction of 37 from the previous year, caused mainly by more country shops buying direct from packers instead of slaughtering locally. During the year an inspector visited all butchers and hide dealers and checked all records of animals slaughtered and hides purchased. A number of prosecutions were obtained for failure to maintain records as required by the Act. The system of tabulation of returns was revised and at year end satisfactory returns were being made by all licensees.

During the process of butcher and hide dealer inspections all R.C.M. Police detachments were contacted for purpose of discussing local live stock movements, brands, stock inspection and use of local butcher and hide dealer records.



THE BRAND ACT

The continuation of an active cattle market, coupled with steadily increasing feedlot feeding and a more effective application of follow up on unregistered brands detected by brand inspectors, has maintained a high interest in brands and brand registration.

During the year 1,863 new brands were issued, made up of 1,747 cattle brands, 111 horse brands, 2 poultry brands and 3 sheep brands. A total of 271 transfers were registered. Brand renewals totalled 4,945, made up of 4,102 cattle, 839 horse, two fox and two sheep. A total of 48 searches were conducted and 8 certified extracts were issued.

Cancellations for 124 cattle brands and 54 horse brands were received for a total of 178. The work of compiling material for a new brand book was completed. The book is expected from the printer early in 1955. This book contains 23,154 cattle brands, 3,879 horse brands, 20 poultry brands, 16 sheep brands, and 9 fox brands. Compilation of material for the book pointed up the inadequacy of the present ledger system of registration which has been followed since the Province was formed. This system has become unwieldy as brand numbers increased.

Considerable study has been made of modern card file systems and recommendation made to transfer the present record to a card system to facilitate ready reference and the compilation of a brand book. The approximate number of brands in good standing at the end of the year was as follows:

Cattle 23,600 Horse 3,980 Poultry 22 Sheep 19 Fox 9.

These figures, while listed as approximate due to renewals being processed, are very near exact.

ALBERTA LIVE STOCK AND LIVE STOCK PRODUCTS ACT

During the year 630 live stock dealers licenses were issued; 480 to dealers and 150 to dealers' agents. No licenses were cancelled but a few applications were rejected for failure on the part of the applicant to establish suitable financial responsibility.

Licenses were issued to six wool dealers and to four wool warehouses.

A number of investigations of complaints from producers and shippers were made under authority of this Act.

THE IMPROVEMENT DISTRICT STRAY ANIMALS ACT

1954 was the first full year this comparatively new Act was in force. Provisions of the Act have greatly simplified the handling of pound districts and the process of handling animals through pounds. Practically no complaints have been received, which would indicate much greater general satisfaction than was the case under the old Act.

Some pounds have been absorbed into Municipalities while a number of new pound districts have been formed and the area of some existing districts has been altered.

At year end approximately 130 pound districts were in operation. During the year poundkeepers were reimbursed \$10.00

per head on 22 animals that were left in pounds as useless or unsaleable.

THE PURE BRED SIRE AREA ACT

No further positive action was taken toward establishing additional areas. Petitions circulated in the M.D. of Red Deer, the County of Ponoka and the M.D. of Glendon had not been completed with sufficient signers at the end of the year. The Municipal Districts of Athabasca and Vermilion report that grade bulls have been eliminated. They are further able to report general satisfaction with the process of elimination, which has been carried out with a minimum of friction.

The Dominion Department of Agriculture assisted in this elimination process by supplying bulls through their Bull Loaning Policy where farmers with very small cow herds organized breeding associations.

In 1954 in these two pure bred sire areas over one hundred farmers purchased bulls through the Provincial Cattle Improvement Policy.

Acknowledgments

During the year excellent co-operation was received from members of the R.C.M. Police in matters of enforcement and investigation. One inspector of this Branch contacted practically all detachments in the Province and discussed matters of live stock regulations with mutual advantage. Assistance was granted in each instance when requested from "K" Division Headquarters.

Assistance from members of the Inspection Branch, Attorney General's Department in enforcing live stock truck regulations was continued. The co-operation and assistance of these enforcement agencies, as well as the various live stock associations, breed associations, exhibitions, Stock Growers Association and the live stock trade in general, are greatly appreciated, and hereby acknowledged.

Report of the Dairy Branch

D. H. McCALLUM, Dairy Commissioner

L. M. Silcox, Supervisor, Dairy Factory Inspection
J. B. Linneboe, Supervisor, Dairy Branch Laboratory
R. P. Dixon, Supervisor, Dairy Cattle Improvement
B. J. McBain, Supervisor, Farm Cost Studies
L. H. Arnold, Supervisor, Frozen Food Locker Plants
A. F. Bennett, Dairy Statistician

GENERAL REVIEW

The promotion and development of the Dairy and Frozen Food Locker industries continue to constitute the principal activities of the Dairy Branch. The services rendered by the various divisions of this branch together with business trends and activities for the industries served during 1954, are outlined in this report.

Milk production continued its upward trend during the year amounting to 1,390,598,000 pounds. This represents an increase of less than 2% over 1953. The need for steady cash income continued to encourage dairy production. Cattle went to pasture in a rather poor condition as a result of a late spring creating feed shortages in many districts. This resulted in lower milk production during the spring and early summer. An excessive amount of rainfall during July and August provided excellent pasture but resulted in most of the first hay crop being spoilt. Excellent dry weather during the fall made it possible to complete harvesting and utilize stubble fields for pasture much later in the season than usual. Poor quality hay and light feed grains resulting from rust and frost may retard milk flow during the early months of 1955.

Milk cow population increased by 14,000 or 4.8% to 303,000 head at June 1st. Milk production per cow showed a decrease during the year of 145 pounds.

It is gratifying to report a much greater interest in cow testing and herd improvement. The number of cows under test increased from 2,582 to 3,790 and the milk production of these cows averaged 9,110 pounds compared to 9,287 pounds in 1953. Larger quantities of milk were used for creamery butter, ice cream and fluid milk sales, while the production of cheddar cheese was below that of 1953.

The total value of all manufactured and processed products plus the value of that portion of milk and by-products retained on farms amounted to almost 50 million dollars, an increase of approximately one million dollars over the previous year.

Butter and cheese quality again showed a slight improvement when measured by the percentage qualifying as first grade. Cream quality showed a slight improvement as the percentage qualifying as Table and Special increased by 4.3%.

ESTIMATED FARM VALUE OF ALBERTA MILK PRODUCTION 1954

The following table shows the quantity, farm value and utilization of Alberta milk production during 1954 in comparison with 1953.

	Year	Pounds	Milk Equivalent Pounds	Percent Total Milk	Price	Value
Butterfat for Creamery Butter	1954	24,902,000	710,611,000	51.1	\$.595 per lb.	\$14,813,000
	1953	24,607,000	702,211,000	51.3	.602 per lb.	14,812,000
Farm Dairy Butter	1954	2,943,000	68,866,000	5.0	.56 per lb.	1,648,000
	1953	3,043,000	71,206,000	5.2	.56 per lb.	1,704,000
Milk and Butterfat for Ice Cream (milk basis)	1954		42,228,000	3.0	2.36 per 100 lbs.	998,000
	1953		41,701,000	3.1	2.41 per 100 lbs.	1,006,000
Milk for Cheese making and Concentrating	1954		62,317,000	4.5	2.42 per 100 lbs.	1,510,000
	1953		67,665,000	5.0	2.46 per 100 lbs.	1,665,000
Milk and Cream Fluid Consumption (milk basis)	1954		271,206,000	19.5	4.28 per 100 lbs.	11,603,000
	1953		257,908,000	18.8	4.29 per 100 lbs.	11,077,000
Milk Farm Home Consumed	1954		132,400,000	9.5	2.40 per 100 lbs.	3,178,000
	1953		131,219,000	9.6	2.40 per 100 lbs.	3,149,000
Fed Farm Animals	1954		102,970,000	7.4	2.40 per 100 lbs.	2,471,000
	1953		96,272,000	7.0	2.40 per 100 lbs.	2,311,000
Kept on Farms:						
Skimmilk from Creamery Butter and Skimmilk and buttermilk from Dairy Butter	1954	688,073,000			.35 per 100 lbs.	2,408,000
	1953	682,968,000			.32 per 100 lbs.	2,186,000
Total	1954		1,390,598,000	100.0		\$38,629,000
	1953		1,368,182,000	100.0		37,910,000

ESTIMATED PRODUCTION AND VALUE OF FACTORY DAIRY PRODUCTS 1954 (Preliminary) COMPARED TO 1953

The following table shows the production and value of dairy products manufactured and processed in Alberta.

		Quantity	Price	Value
Creamery Butter, lbs.	1954	30,368,000	\$.58 per lb.	\$17,613,000
	1953	30,009,000	.5831 per lb.	17,498,000
Cheddar Cheese, lbs. (including net increase in processing)	1954	2,580,000	.356 per lb.	919,000
	1953	2,790,000	.365 per lb.	1,019,000
Ice Cream, Gallons*	1954	2,484,000	1.66 per gal.	4,123,000
	1953	2,453,000	1.66 per gal.	4,072,000
Fluid Milks Sales, lbs. (including processing charges)	1954	207,200,000	5.74 per 100 lbs.	11,895,000
	1953	194,705,000	5.76 per 100 lbs.	11,218,000
Cream as Milk, lbs. Fluid Sales (including processing charges)	1954	64,006,000	4.29 per 100 lbs.	2,746,000
	1953	63,203,000	4.35 per 100 lbs.	2,747,000
Skimmilk and Buttermilk Sales for Human Consumption (including processing charges)	1954	10,260,000	3.21 per 100 lbs.	329,000
	1953	9,967,000	3.21 per 100 lbs.	320,000
Skimmilk, Buttermilk, lbs.	1954	35,336,000	.35 per 100 lbs.	124,000
	1953	34,870,000	.32 per 100 lbs.	112,000
Whey, lbs	1954	21,285,000	.175 per 100 lbs.	37,000
	1953	23,026,000	.16 per 100 lbs.	37,000
Miscellaneous Manufacturing products**	1954			2,381,000
	1953			2,548,000
Total	1954			\$40,167,000
	1953			39,571,000

*Mix converted to Ice Cream on basis of 100% overrun.

**Includes concentrated milk products, cottage cheese, whey butter, Yoghurt and cheese other than Cheddar.

DAIRY FACTORY INSPECTION AND INSTRUCTION SERVICE

Of the 130 dairy manufacturing plants operating in 1954, there were 61 licensed as combined factories. The remainder are engaged in manufacturing or processing single products. These consist of 31 creameries, 8 cheese factories, 1 concentrated milk plant and 29 milk pasteurizing plants.

Ten dairy districts are served by full time inspectors whose duties include inspection and instruction to all dairy factories and frozen food locker plants. The Peace River area was covered during the summer months by a staff member of the Fairview School of Agriculture. Instruction and field work at cheese factories located in northern Alberta was carried out by an inspector especially qualified in cheese manufacture. The program for this work involved additional emphasis on quality tests for milk delivered to all cheese factories.

Total dairy plant inspections for the year were 1,590. Routine checks were made on plant grading of 72,405 shipments of cream and 28,531 samples of milk and cream were officially tested for butterfat content.

Quality Program.

The quality improvement program continued on raw produce with 4,405 officially recorded Methylene Blue tests made on receipts at plants purchasing whole milk. Experimental Resazurin tests, not fully recorded, were made on a trial and comparison basis. Likewise sediment tests were made for demonstration and educational purposes. Of these, 2,300 are officially recorded mainly for cheese plants.

The quality improvement program was further extended by despatching producer samples in iced containers to the Dairy Branch Laboratory. The bacteriological reports provided information for direct application to farm problems. The analyses on samples of the finished product which were also despatched to the Laboratory by inspectors were responsible for solving plant processing problems. A definite reduction in the bacteria counts indicates a very appreciable improvement in average quality of pasteurized milk throughout the province. The annual Milk Plant Quality Control Competition is based on the results of regular laboratory analyses for samples forwarded by Inspectors of this branch and Health Unit officials.

Co-operation with Agriculture Extension Services and with the Department of Public Health, in the form of meetings under local arrangements conducting milk and cream competitions, etc., is continuing to expand.

Licensing.

State of building repair, suitability of equipment and general sanitation are the three essential factors affecting issue of yearly operating licenses. A total of 128 licenses were issued to dairy manufacturing plants during 1954.

Operators of the Babcock test for milk and cream require a yearly license, as do all personnel engaged in grading of cream. New licensees are qualified by experience plus written and

practical examinations before the license is issued. During the year 255 licenses were renewed and 26 new candidates were qualified.

Butter and Cheese Quality.

The yearly report of the Federal Dairy Produce Graders establishes another record for Alberta buttermakers. For the first time 96% of all creamery butter graded qualified as first grade. Cheese quality also improved with first grade amounting to 87.2%. Almost 40% of this top quality cheese qualified for the bonus and this payment brought an additional \$11,500.00 to factory patrons. It is worthy of mention here that of the dairy factories from which the entire production of butter or cheese was graded, six creameries made 100% first grade butter. Under the same circumstances one cheese factory made 99.5% first grade cheese.

Exhibition Awards.

The very satisfactory accomplishments of Alberta buttermakers and cheesemakers in regular commercial work is further augmented by the record number of prizes they were awarded at the five major 1954 Canadian Exhibitions. In these All-Canada competitions 217 prizes plus four special awards came to this province for butter, and Alberta cheese won a total of 17 prizes.

Unwashed Exhibition Butter.

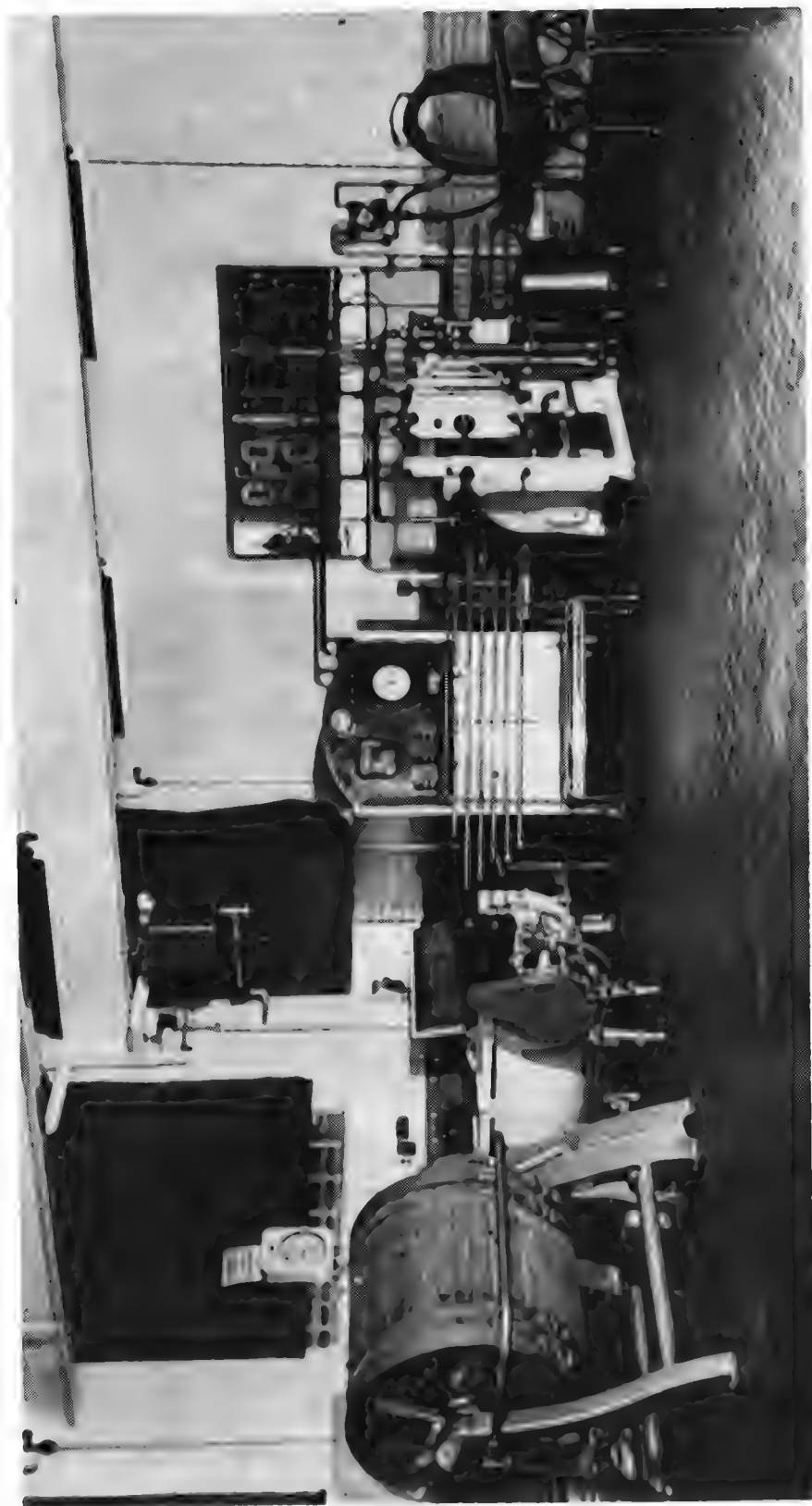
To secure information on the keeping qualities of unwashed exhibition butter a special competition was arranged for Alberta buttermakers. Two samples of exhibition butter from the same churning, manufactured by the unwashed process were submitted in July. One sample was judged while fresh and the second sample will be judged after 7 months in storage. It is expected that the results of this competition will provide useful information to supplement the results of the experiment on Washed and Unwashed commercial butter conducted during 1953.

Check Weighing of Creamery Butter.

There were 23,319 boxes of butter weighed representing 1,273,446 pounds of creamery butter compared with 12,595 boxes and 680,012 pounds during 1953. Increased purchases by the Agricultural Products Board, which requires certificates, were responsible for the extra weighings.

Diploma Course in Dairying.

The Dairy Branch again co-operated with the Department of Dairying, University of Alberta, and Canadian Vocational Training in holding a six month course in dairying. Sixteen students registered early in November, 1953 and thirteen completed the course at the end of April, 1954. The first five months were spent at the University on strictly dairy subjects while the last month on plant engineering at the Vocational Training School, Calgary. Three students were awarded Diplomas in Dairying and six received Certificates. All those completing the course found ready employment in the industry, in fact, the demand exceeded the supply.



Some of the New Facilities at the Department of Dairying, University of Alberta

Dairy Plant Changes.

The Elk Point Dairy Products Ltd., having acquired the Elk Point Creamery which did not operate during the closing months of 1953, began operations on January 19th.

Purity Dairy, Lethbridge added a new department to their plant and commenced making cheddar cheese on January 28th.

Milk pasteurizing departments were added to Grand Centre Creamery on April 5th, Lac La Biche Creamery on May 1st, and Evansburg Creamery on July 12th.

King's Dairy, Stettler was purchased by Stettler Milk Co. Ltd. on June 1st. Raymond Dairy discontinued operating on July 4th.

Silverwood Dairies Ltd., Edmonton erected a separate unit to house the ice cream department.

Model Dairies, Fairview changed the name of the business to Red Cap Dairy.

Palm (Woodland) Dairies, Edmonton put into operation a milk pasteurizing plant at South Edmonton on October 1st.

Clive Creamery was destroyed by fire on September 9th and at the year end it has not been rebuilt.

DAIRY MANUFACTURING PLANTS

Following is a list of dairy manufacturing plants licensed in the Province during 1954. The type of operation is indicated by the letters following each location, as follows:

B—Butter, C—Cheese, D—Dry Milk By-Products, E—Evaporated Milk, I—Ice Cream, M—Pasteurized Milk and Cream, P—Processed Cheese.

Northern Alberta Dairy Pool Limited, head office Edmonton with branches at:

Andrew	B	Grande Prairie	B-I-M	Round Hill	C
Barrhead	B	Hay Lakes	B	Sedgewick	B-D-M
Bawlf	C	Holden	B	St. Paul	B-M
Bonnyville	B-M	Leduc	B-M	Thorsby	C
Bruderheim	C	Mannville	B	Vegreville	B-M
Camrose	B-M	Millet	B-C	Vermilion	B-M
Daysland	B	Onoway	B	Westlock	B-M
Edgerton	B	Peace River	B-I-M	Wetaskiwin	B-M
Edmonton	B-D-I-M	Radway	B		

Central Alberta Dairy Pool, head office Red Deer with branches at:

Acme	B	Delburne	B-M	Olds	B-M
Alix	B-D	Eckville	B-M	Ponoka	B-M
Bentley	B	Edberg	B	Red Deer	B-D-E-M
Bluffton	B-D	Elnora	B	Rimbey	B-M
Brooks	B-M	Hanna	B-M	Rocky Mountain	
Calgary	B-I-M	Lethbridge	B	House	B-M
Coronation	B-M	Neapolis	C	Stettler	B-M

United Dairies Limited, head office Calgary with branches at:

Calgary	B-D-I-M	Fort MacLeod	B	Medicine Hat	B-I-M
Didsbury	B-D	Lethbridge	B-I-M	Red Deer	B-M

Independent Creameries Limited, head office Innisfail with branches at:

Bowden	B	Innisfail	B-M	Lacombe	B-M
------------------	---	---------------------	-----	-------------------	-----

Palm Dairies Limited, head office Calgary with branches at:

Calgary	I-M	New Sorepta	B	Tofield	B-M
Calmar	B-M	Ryley	D	Warburg	C
Edmonton	B-D-I-M				

Swift Canadian Co. Ltd., head office Edmonton with branches at :

Edmonton B-D Calgary B

Purity Dairy, head office Lethbridge with branches at:

Lethbridge B-C-I-M Medicine Hat B-M

Individually Operated Plants:

Athabasca Creamery	Athabasca	B-M
Barrhead Dairy	Barrhead	M
Bashaw Creamery	Bashaw	B-M
Bassano Dairy Products	Bassano	M
Beaverlodge Dairy	Beaverlodge	M
Brown's Dairy	Drumheller	M
Burns & Co. Ltd.	Calgary	B-P-C
Cardston Co-op. Ltd.	Cardston	B
Carstairs Creamery	Carstairs	B
Castor Creamery	Castor	B-M
Chipman Creamery Ltd.	Chipman	B-M
Claresholm Creamery	Claresholm	B
Clive Creamery	Clive	B
Clover Leaf Cheese Co. Ltd	Calgary	C
Cochrane Creamery Ltd.	Cochrane	B-M
Dairy Dell Dairy	Picture Butte	M
Davidson's Dairy	Wainwright	M
Derwent Creamery	Derwent	B
Didsbury Dairy	Didsbury	M
Donalds Co-op. Creamery Association	Donalds	B
Drumheller City Dairy	Drumheller	M
East Coulee Dairy	East Coulee	M
Edson Dairy Ltd.	Edson	M
Elk Point Dairy Products Ltd.	Elk Point	B
Evansburg Creamery	Evansburg	B-M
Fenton's Dairy	Canmore	M
Fletcher's Dairy	Brant	B
Glendon Creamery	Glendon	B
Grand Centre Creamery	Grand Centre	B-M
Grimshaw Dairy	Grimshaw	M
Hickok's Dairy	Three Hills	M
High Prairie Dairy	High Prairie	M
Claresholm Dairy	Claresholm	M
High River Creamery	High River	B-M
Jasper Dairy Ltd.	Edmonton	B-I-M
Lac La Biche Creamery	Lac La Biche	B-M
Linden Co-op. Dairy Association Ltd.	Linden	C
Maple Leaf Creamery (Alberta) Ltd.	Calgary	B
Markerville Creamery	Markerville	B
Model Dairies	Calgary	B-I-M
Mountain View Dairy	Pincher Creek	M
McLennan Dairy	McLennan	M
Nanton Creamery	Nanton	B-M
Ness Dairy	Camrose	M
New Coaldale Cheese Factory Co-op. Ltd.	Coaldale	C-M
Okotoks Creamery	Okotoks	B
Pass Dairy	Bellevue	M
Pincher Creek Co-op. Association	Pincher Creek	B
Raymond Dairy	McLennan	M
Red Cap Dairy	Fairview	M
Sangudo Creamery	Sangudo	B-M
Silverwood Dairies Ltd.	Edmonton	B-D-I-M
Smith Dairy	Cardston	M
South Edmonton Creamery Ltd.	Edmonton	B-I
Sparkle Dairy	Redwater	M
Star Dairy	Claresholm	M
Stettler Milk Co. Ltd.	Stettler	M
Sundre Creamery Ltd.	Sundre	B-M
Sylvan Lake Creamery	Sylvan Lake	B-M
U.I.D. Co-op. Cheese Factory	Glenwood	C
Viking Co-op. Creamery Association	Viking	B-M
Vilna Creamery	Vilna	B

LABORATORY SERVICE

The figures listed below indicate the nature of the service provided and the work done throughout the year in the Dairy laboratory. The figures for the year 1953 are included for the sake of comparison.

	No. of Samples	
	1954	1953
Butter samples for Moulds and Yeasts	3,480	3,514
Water Samples from Dairy factories	20	51
Bacteriological Creamery surveys	104	88
Butter samples for pH	1,585	1,633
Mastitis and Bangs Control Service	1,608	2,121
Milk Control Service	5,259	4,149
Cow Testing Service	11,944	8,935
Cheese for Extraneous Matter	258	263
Egg Products	428	432
Miscellaneous	333	384
	25,016	21,570

The services offered by the Dairy Laboratory to the Dairy Industry have been utilized more extensively in the past year and higher quality products have resulted.

Milk Quality Control.

The greatest improvement has been found in the fluid milk trade. This improvement is largely due to the laboratory service offered by the Branch to all milk pasteurizing plants. Through the co-operation of the dairy inspectors and Public Health officers samples have been submitted regularly and the results used as a basis for proper plant procedures. Inspection of producer premises by Health Units, together with a more strict standard for grading, has certainly resulted in a higher quality of milk being received at milk pasteurizing plants.

Cheese Sediment Tests.

During the year sediment tests for extraneous matter in cheese have been carried out routinely and the results of these tests formed the basis for a yearly cheesemakers' competition.

The following data indicate the number of sediment tests on cheese made during the year and the percentage of tests for each classification. The 1953 figures are shown for comparison.

Year	No. of vats examined	Classification of Percentage			
		Class 1	Class 2	Class 3	Class 4
1953	263	8.4%	84.0%	7.2%	0.4%
1954	258	7.9%	84.9%	6.8%	0.4%

Ice Cream and Cottage Cheese.

As in previous years a Provincial Ice Cream Competition has been carried out with samples lifted four times a year by Dairy Branch inspectors. These samples are judged on the basis of physio-chemical, as well as bacteriological tests. A competition for Cottage Cheese judged on the same basis as ice cream has been instituted this year in line with the Department's policy of quality improvement.

Mould and Yeast.

The mould and yeast count continues to serve as a measure of creamery sanitation. The importance of this test is now emphasized by the fact that the Agricultural Products Board use the mould and yeast reports as a basis for purchasing creamery butter under the floor price policy. The following tabulation shows the number

of samples analyzed and the results expressed as percentage of samples in each classification for the past two years;

Year	No. of Samples	Excellent	Good	Fair	Poor
1954	3,480	81.9	9.9	3.0	5.2
1953	3,514	80.9	11.4	3.3	4.4

It will be noted that a larger percentage of samples qualified as excellent; however, there was also a slight increase in the percentage classified as poor.

Butter Acidity.

As a further check on creamery butter quality pH determinations were made from representative samples from all factories throughout the year. These tests are a check on plant neutralizing practices and it is considered that the keeping quality of the butter is closely allied to its serum acidity.

The following table shows the percentage of samples falling within various pH ranges during 1953 and 1954;

Year	Over 7.7	7.3 to 7.7	6.7 to 7.2	6.2 to 6.6	Under 6.2
1954	13.5	42.7	40.6	3.2	
1953	10.4	38.3	47.8	3.2	.3

Present recommendations favour a pH of from 7.0 to 7.25. It will be noted that the tendency towards lower neutralizing and higher pH values has continued during the year.

Miscellaneous.

Frozen egg samples have been submitted by the Poultry Marketing Services, Canada Department of Agriculture, for bacteriological analyses as well as solids content of certain egg products. Frozen egg products are graded and marketed according to the bacteria count.

This laboratory has continued the free service to herd owners of a mastitis program, and it is hoped that more milk producers will take advantage of this service in order that mastitis may be brought under control. The elimination of mastitis means a healthier herd which is bound to increase production and improve milk quality. The following figures show the rate of infection for samples submitted during 1954:

Sample pos. 27.4% Questionable 9.6% Negative 63.0%

The Provincial Dairy Laboratory has continued to supply free to creameries and cheese factories such items as alkali solution, indicator and coloring agent for rejected milk and cream.

The Dairy Bacteriologist attended district conferences and spoke on a number of topics of interest to the trade as well as giving advice and help in all plant problems.

DAIRY CATTLE IMPROVEMENT SERVICE

Cow Testing.

The work of this division again greatly expanded during 1954. Thirty-seven more herds and 1,176 more cows were tested than in 1953. The following table listing the number of cows tested, indicates that the total has almost doubled in the past two years:

	1946	1949	1952	1953	1954
No. of herds under test	86	101	115	141	189
No. of cows under test	1,145	1,457	1,901	2,582	3,790

This large increase has made it most difficult to cope with record keeping and certificates. Assistance was given to the Dairy Inspectors at Ponoka and Red Deer in testing samples, particularly during the summer. Prompt despatch of Herd Record Books, Certificates and herd owners' reports has not always been possible.

Testing centres were in operation at Edmonton, Ponoka, Red Deer and Calgary. The number of cows under test at each centre, during the past two years is shown in the following table:

	1953	1954
	No. Cows Tested	No. Cows Tested
Edmonton	1,196	1,743
Ponoka	642	925
Red Deer	524	861
Calgary	220	261

(a) Mail Order Testing.

Two plans are offered herd owners. Plan No. 1 is based on daily weighing and monthly tests, while Plan No. 2 is based on a record which is computed from the weight of milk given on the 15th day of each month, at which time samples are lifted for butterfat tests. Weights and samples, in both plans, are taken by the herd owners and the butterfat tests made by officials of the Dairy Branch at one of the above-mentioned testing centres.

(b) Owner-Sampler Route Plan Testing.

On June 1st, 1954 a system of testing was offered to milk producers in the Edmonton Milk Shed. A full-time fieldman was employed to make monthly visits to farmers testing under this plan. Sample boxes were delivered to the farm and picked up again the following day. At the time of his visit, the fieldman ear-tagged calves, checked records and assisted the herd owner in his record keeping. The herd owner could keep records under either of the two plans referred to in (a) Mail Order Testing.

From the inauguration of this plan on June 1st until the 31st of October, a total of 386 cows in 15 herds entered under the program.

To indicate the extent to which each plan has been utilized by herd owners for both the mailing and owner-sampler systems, the following table has been prepared showing average production under each plan, as well as the Provincial average for all cows under test. The previous year's figures are shown in brackets:

	*Plan 1	**Plan 2	Total
No. of herds under test	65 (58)	124 (83)	189 (141)
No. of cows under test	980 (812)	2,810 (1,770)	3,790 (2,582)
Ave. no. of cows per herd	15.0 (14)	22.6 (21.3)	20.0 (18.3)
Herd Ave. on basis of years (T)			
No. of cow years	663 (567)	1,780 (1,145)	2,443 (1,712)
Ave. production of milk lbs.	9,028 (9,454)	9,138 (9,205)	9,110 (9,287)
Ave. production butterfat lbs.	321.5 (343.1)	312.3 (325.2)	310.8 (331.1)
Ave. Test			3.46 (3.57)

*Plan 1 Daily weighing and monthly tests.

**Plan 2 Computed records from one day's weighing and monthly tests.

(T) The total number of cows on test during the year is used in determining the herd average, except where new cows are placed on test, or a cow is sold or dies, in these cases only that part of the year in which she produces is used.

It will be noted there are approximately three times as many cows being tested under Plan 2 as under Plan 1. Plan 2, because of the minimum of labour required, is proving very popular especially with the larger herds.

WEIGHING AND TESTING IS THE BASIS FOR HERD IMPROVEMENT



In the above photo the cow testing fieldman is shown giving instruction on milk sampling to a herd owner on the new route plan established in the Edmonton area.

The average production of cows on test shows a decrease of 177 lbs. of milk and 20.3 lbs. of butterfat from 1953. This decrease is in line with the general decrease for all milk cows in the province. The cold wet weather, prevailing during most of the pasture season, was undoubtedly partly responsible for this decrease. Another factor was possibly the increase in the number of cows kept for milk purposes, many of which were not of the strictly dairy breeds. These cows were milked because of the lower farm income from grain and beef.

Individual reports go forward to every herd owner having his herd tested. These reports give the total milk and butterfat production of his herd for the year, as well as the herd average. A pictorial graph showing the production of each cow in the herd is also prepared. Copies of these reports are forwarded to all District Agriculturists in whose areas the herds are located. Herd owners use the reports to carry out culling, selection, breeding and feeding programmes.

Competitions based on the production records stimulate interest in herd improvement and high butterfat production per cow. Winners in the "Herd Improvement" and "Greater Average Butterfat" Competitions are announced at the Alberta Dairymen's Convention.

Production certificates are issued on all cows completing a lactation with the required standards.

The "Honour Roll", which lists all herds of 5 cows or more that have been on test for a full eight month recorded period with an average of 300 lbs. of butterfat or over, contained 80 herds. This represents an increase of 27 herds over the previous year.

Extension Work.

Extension work carried out by the Supervisor included the following:

- (a) Farm visits to 55 of the herd owners under test. Record analysis and herd improvement programs were discussed. At the time of these visits the District Agriculturist was contacted and dairymen in the area with specific problems, were visited;
- (b) Addressing 36 dairy meetings held by the District Agriculturists and judging 10 "Achievement Days" of 4-H Dairy Clubs;
- (c) Preparation of circulars, radio talks, farm notes and correspondence regarding dairy cattle housing, feeding and management;
- (d) Co-operation with the Livestock Branch in securing dairy bulls and females placed under the "Cattle Improvement Policy" and the "Livestock Listing Bureau" services. A total of 28 bulls and 32 females were purchased. In addition to these, assistance was given to farmers in locating both bulls and females, with purchase being made directly by the buyer. Approximately 50 head were purchased on the advice of the Supervisor;

- (e) Organizing and establishing the "Owner-Sampler Route Plan" system of testing. Together with the fieldman, 30 dairy farmers interested in testing, were visited in the Edmonton area. Every herd entered on the test was sampled for the first time by the fieldman.

Dairy Cattle Sales.

Three consignment sales of dairy cattle were held during the year. The first Annual Registered Holstein Sale was held at Edmonton on September 1st, 1954. Approximately four hundred people were in attendance. Forty-five registered Holstein females, consigned by ten purebred breeders, sold for an average of \$371.00. The top price was \$775.00 for a four-year-old consigned by Bailey Farms Ltd., Clover Bar.

Forty-five head of registered and grade Holstein dairy cattle consigned by central Alberta dairymen were sold at Red Deer on October 26th, 1954. This sale is planned to become an annual event.

The annual Southern Alberta Sale, held at Calgary, offered 75 head of grade and purebred Holstein and Ayrshire cattle. The highest price here was \$460.00 paid for a five-year-old purebred Holstein consigned by C. Clark of Carstairs.

Several private dispersal sales were held. The most notable one was the "Chestermere" Ayrshire herd of C. Borrett at Forest Lawn. This sale was a complete dispersal with most of the cattle purchased by local buyers.

Edmonton Artificial Breeding Unit.

The artificial breeding unit established at Edmonton on December 1st, 1953, by the Edmonton Fluid Milk and Cream Producers' Association, had a very successful first year of operation. Service was given to 308 dairy farmers in the Edmonton area and approximately 3,000 cows were inseminated. Increased interest in herd improvement and cow testing has been shown by members of this association with several members indicating their intention to place their herd on test early in 1955. To meet this demand sufficient equipment and personnel should be provided to assure herd owners of a complete and satisfactory service.

FARM COST SERVICES

The work in this field has expanded considerably during the past year. To indicate the nature and extent of studies now being conducted the following tabulations have been prepared:

(A) NUMBER OF FARMS UNDER STUDY

Year	Fluid Milk	Mixed	Canning Crops	Total
1954	96	50	31	177
1953	82	53	0	135

(B) NUMBER OF ENTERPRISES COSTED

Year	Mixed Farm Study					Fluid Milk		Canning Crops	Total
	Cream	Beef	Hogs	Poultry	Grain	Milk	Crops		
1954	24	5	27	16	30	96	95		293
1953	25	5	30	18	22	82	0		182

It will be noted that an additional 42 farms and 111 enterprises were studied in 1954 than in the previous year. A new study on canning crop farms, introduced during the year, was responsible

for most of the increase. To handle this extra work and prepare the reports on the fluid milk farms for early fall review required extra part time help and foregoing summer holiday leave for part of the staff.

Fluid Milk Studies.

At the request of the Board of Public Utility Commissioners and producer organizations, who have assisted financially, studies have been continued in the four principal fluid milk markets of the province. The field staff have also made periodic checks on conditions having the greatest effect on production costs for the milk sheds of Red Deer, Ponoka and Camrose. This information is related to the more complete data for the principal markets.

Records for the fluid milk studies were closed in June and July and the reports were completed by October. This is the earliest date that such information has been available since the work commenced in 1939. Each co-operating farmer was supplied with a complete record of his own operations. The same report contained similar information on the group average for farms under study in that area. This affords the farmer an opportunity to compare his position with the average for his district.

The continuation of these studies has provided continuous and comparable data for 16 and 12 years respectively for the milk sheds of Edmonton and Calgary. As far as possible the same farms have been retained in the study. This has provided valuable material on changes in management practices and its effect on costs as well as farm income. A report on the trends over this period would prove valuable to producers, price fixing boards and extension workers.

Mixed Farm Study.

This study, comprising 50 farms in the Leduc-Wetaskiwin area, has now completed 4 years of cost records for mixed farms. These farms represent various production combinations of grain, beef, hogs, churning cream or poultry. It was possible to cost 100 separate enterprises from the 50 completed farm accounts for 1953. Detailed records made it possible to accurately divide feed and labour charges and to allocate overhead charges.

It was intended that the data for the first three years of this study would be presented for public distribution in bulletin form; however, this was impossible when it became necessary to commence a study of canning crop farms. Farm summaries were prepared for co-operating farmers and mimeographed copies of this material were supplied to Branch heads within the Department.

Canning and Specialty Crop Study.

At the request of growers this study commenced in May of the year under review. Part time assistance in the field was supplied by a member of the Field Crops Branch. Following a meeting with the canning crop growers it was decided to set up accounts for as many of the pea growers as possible. It has been possible to make use of 25 farm accounts for this study. Only about half of a possible 37 pea shippers to the Taber Cannery have been able to complete accounts. Other crops, such as corn, sugar beats or beans, grown on these farms will be costed, in addition to supplying a labour earning statement for the total farm operation.

If sufficient interest is shown by the majority of growers it is expected that this study will be expanded and continued for at least three years to secure information on cropping practices proving most beneficial.

Extension Work.

Requests for information from these studies continue to increase. Extension workers, milk control agencies, University students and representatives of the Federal and University Economics staffs have all utilized data available from the farm accounts under study. A special study by the Economics Division, Canada Department of Agriculture, of "Input and Output Relationships" made use of records from both the fluid milk and mixed farm studies.

Several requests were received from individual farmers, some of whom were immigrants, for economic advice in establishing a dairy farm business. Radio talks and addressing farm groups were other forms of extension work carried on by staff members of this division.

MILK PASTEURIZATION BY-LAWS

To indicate the extent of compulsory pasteurization within the province following is a list of cities, towns and villages which have passed compulsory pasteurization by-laws to December 31st, 1954:

Athabasca	Eckville	Pincher Creek
Barrhead	Fairview	Ponoka
Bashaw	Fort Saskatchewan	Rocky Mountain House
Bassano	Grimshaw	Sedgewick
Bentley	Hanna	St. Paul
Brooks	High Prairie	Strathmore
Calmar	High River	Three Hills
Camrose	Holden	Tofield
Coaldale	*Lac La Biche	Vegreville
Coronation	Leduc	Vermilion
Delburne	McLennan	Viking
Drumheller	Morinville	Westlock

* By-Law passed in 1954

FROZEN FOOD LOCKER PLANTS

The administration of The Frozen Food Locker Act including regular inspection of plants together with instruction for handling food products is carried out by the inspectors under the direction of a supervisor. The main items of inspection include checking storage room temperatures for uniformity, sanitation of equipment and plant, packaging, identification of parcels, freezing and placing in storage. A total of 1,210 inspections were made during the year, an increase of 96 over 1953.

During the year staff members spent considerable time introducing better wrapping and packaging materials at locker plants. Results of tests, completed at the Horticulture Station, Brooks, were used to introduce more suitable materials which would assure superior quality products coming out of storage. Further tests on a number of new materials are now under way at the Horticulture Station.

Locker plant operators received considerable assistance from the supervisor in planning new slaughter houses and remodelling old ones, reinsulating storage rooms, slaughtering and meat cutting demonstrations and the curing of meat products.

The scoring of all plants for the Merit Award Competition and for Proficiency Certificates continues to be a duty of the inspectors. Top plants in each inspector's district are rescored by officials of the Edmonton office. Winners are announced at the Annual Convention of the Alberta Quick-Freeze Locker Association. At the convention held in February, 1954, it was announced that the winners were, Hanna's Frozen Foods Ltd., Calgary, in Section A and Spoor Meat Market & Locker Ltd., Rocky Mountain House, in Section B.

To recognize outstanding operation for Alberta locker plants, the Dairy Branch introduced "proficiency certificates" during the year. These certificates will be awarded to plants scoring high in the Merit Award Competition and having met the Department's requirements on a number of important items.

A new plant was constructed and put into operation by Mr. John Olson of Sexsmith on June 24th. This is a very modern plant with a capacity of approximately 400 lockers. Two plants were totally destroyed by fire. The Beiseker Branch plant located at Irricana was destroyed in April while the Calgary Cold Storage plant at Calgary was destroyed on December 28th. A considerable amount of food was lost in the Irricana fire due to smoke damage, however, most of the food stored in lockers at the Calgary plant, was saved. The Irricana plant will not be rebuilt and no decision has been made respecting future operations of the Calgary Cold Storage.

The Union Milk Company of Calgary discontinued locker plant operations on December 31st. This small plant served mainly plant employees and milk shippers. Sufficient lockers were readily available at other Calgary plants to supply these patrons.

The following statistics have been tabulated from the monthly reports received during the 12 month period ending November 30th, 1954. Products processed at plants for home freezers as well as for storage in lockers are included. Similar statistics for the previous year are added for sake of comparison.

LOCKERS				
Products	1954		1953	
	Pounds	%	Pounds	%
Fresh Meat	12,090,284	81.0	12,519,724	79.3
Cured and Smoked Meat	992,890	6.7	1,280,443	8.1
Lard Rendered	135,136	.9	154,967	1.0
Fish	99,440	.7	106,189	.7
Poultry	1,011,360	6.8	1,059,829	6.7
Big Game	117,437	.8	58,593	.4
Game Birds	64,535	.4	71,422	.4
Fruits and Juices	110,116	.7	152,958	1.0
Vegetables	205,441	1.4	277,684	1.8
Miscellaneous	92,416	.6	100,375	.6
Total	14,919,055	100.0	15,782,184	100.0
HOME FREEZERS				
Products	1954		1953	
	Pounds	%	Pounds	%
Fresh Meat	1,928,235	83.8	1,175,226	76.5
Cured and Smoked Meat	93,843	4.1	61,236	4.0
Lard Rendered	6,656	.3	4,123	.3
Fish	14,857	.7	18,731	1.2
Poultry	30,428	1.3	20,538	1.3
Big Game	4,794	.2	1,047	.1
Game Birds	267	.0	1,284	.1
Fruits and Juices	68,859	3.0	68,794	4.5
Vegetables	82,511	3.6	83,131	5.4
Miscellaneous	69,341	3.0	100,809	6.6
Total	2,299,791	100.0	1,534,919	100.0
Total for Lockers and Home Freezers	17,218,846		17,317,103	

	1954	1953
Number of plants reporting	154	153
Number of lockers installed	51,984	52,999
Average number of lockers installed	338	346
Number of lockers rented, December 1st	46,560	49,305
Percentage of lockers rented, December 1st	89.6	93.0
Average lbs. food stored per locker, with complete service	334.5	332.4
Average lbs. food stored per locker, with incomplete service	177.9	194.6
Average poundage per locker, all plants	320.4	320.0
Average lbs. per locker on the basis of, lockers rented for 12 months	316.9	320.2
Inspections during the year	1,210	1,114

The above figures indicate a decrease of 863,129 pounds of food processed for lockers and an increase of 764,872 pounds processed for home freezers. The percentage of lockers rented as at December 1st also shows a decrease amounting to 3.4% from the previous year. The wider use of home freezers has been responsible for fewer locker rentals and less food processed for lockers. The monthly reports indicated a fairly heavy decrease in locker rentals in the early part of 1954 with a gradual increase again towards the latter part of the year. This is the reverse from to previous years and is possibly an indication that the home freezer sales are levelling off. The very mild weather during the late fall and early winter possibly had an effect. It is also noted that the city plants have been more affected by the home freezers than plants operating at country points.

Milk Control Report

Submitted by the

BOARD OF PUBLIC UTILITY COMMISSIONERS

J. B. Moore, Administrator of Milk Control

Dealing only with the eight major controlled areas, six of the eight show increases in fluid sales—Standard milk—ranging from approximately 5% to 18%. One of the eight shows a decrease of approximately 2% while the remaining one—the Crow's Nest Pass area—indicates a decrease of over 6%, reflecting, undoubtedly, the economic conditions prevailing in that area.

Licensed milk producers now total 868, an increase of 4% over the number in 1953.

The Board continued to actively assist in the Dairy Cost Survey and to provide a portion of the funds necessary to defray the costs involved.

One application for the institution of milk control—that of the Town of Cardston—was heard on October 20th, 1954. The application was refused.

An application by the Distributor in the Crow's Nest Pass area requesting adjustment of the producer price—and agreed to by the producers—was approved by the Board.

A representative of the Board attended at the National Dairy Council meeting in Ottawa.

Report of the Poultry Branch

Robert H. McMILLAN, Poultry Commissioner

INSPECTORS:

G. R. Milne	Edmonton	E. E. Kitchen	Red Deer
G. O. Johnson	Edmonton	W. Hutchison	Calgary
W. E. Hughes, Manager, Provincial Poultry Plant			

GENERAL REVIEW

Conditions in the poultry industry in 1954 were not as good as in 1953, with continued high production costs and lower prices for eggs and poultry meats. Production of both eggs and poultry meats approached that of 1952, and with fewer export outlets some surplus accumulated by the year end. The Agricultural Prices Support Board continued for the year and some eggs were taken over by the Board. The support program is to continue for the coming year. There has been a marked increase in the consumption of poultry meat—probably due to lower prices and to more modern marketing methods.

Egg and poultry meat production as indicated by receipts at Registered Stations are shown in Table I.

TABLE I

	Egg Receipts at Registered Egg Grading Stations (30 dozen cases)	Dressed Poultry Receipts at Registered Stations (pounds)
1951		8,590,483
1952	508,868	10,748,356
1953	533,814	9,874,287
1954 (estimate)	508,000	10,200,000

TABLE II

TOTAL NUMBER OF WHOLESALE POULTRY PREMISES OPERATING IN ALBERTA

Year	Fully Registered	Tentative Registration	Total Operating
1944			160
1945			188
1946	177	12	189
1947	168	17	185
1948	167	3	170
1949	163	3	166
1950	167		167
1951	165		165
1952	157		157
1953	154		154
1954	152		152

FLOCK APPROVAL

This program continues to be a major project of the Poultry Branch; keeping sixteen temporary inspectors, in addition to four permanent inspectors, fully engaged during the fall and winter months.

TABLE III
SUMMARY OF FLOCK APPROVAL 1930-1954

Year	Method of Testing	No. of Flocks	No. of Birds	% Reaction
1930-31	Tube Agglutination	148	18,608	20.2
1931-32	" "	232	31,177	12.9
1932-33	" "	188	26,381	8.6
1933-34	" "	205	33,295	7.3
1934-35	" "	645	104,858	11.2
1935-36	" "	615	94,536	5.5
1936-37	" "	815	136,228	5.5
1937-38	" "	677	108,908	4.8
1938-39	" "	534	92,355	4.51
1939-40	Whole Blood	437	80,927	5.1
1940-41	" "	412	91,868	2.6
1941-42	" "	510	120,198	2.12
1942-43	" "	460	120,841	0.35
1943-44	" "	664	165,903	0.716
1944-45	" "	694	198,877	0.736
1945-46	" "	632	186,992	0.798
1946-47	" "	792	248,666	0.526
1947-48	" "	862	276,716	0.645
1948-49	" "	708	231,255	0.234
1949-50	" "	826	255,561	.193
1950-51	" "	930	291,660	.189
1951-52	" "	1,057	294,320	.261
1952-53	" "	1,078	302,599	.229
1953-54	" "	1,039	307,866	.242

HATCHERY OPERATIONS

The hatchery season was better this year than in 1953 and exceeded the previous high of 1951.

TABLE IV
DEVELOPMENT OF HATCHERIES AND CHICKS SALES SINCE 1936

Year	Egg Setting Capacity	% of 1936	Chicks Hatched	% of 1936
1936	924,300		1,028,881	
1937	1,036,526	112.1	1,068,056	103.8
1938	1,033,906	111.9	1,171,082	113.8
1939	1,052,759	113.9	1,394,194	135.5
1940	1,203,368	130.2	1,538,597	149.7
1941	1,269,117	137.3	1,939,052	188.4
1942	1,407,280	151.2	2,631,468	255.8
1943	1,408,070	152.3	3,607,372	250.6
1944	2,102,434	223.1	5,476,476	532.3
1945	2,208,938	238.9	4,917,366	477.9
1946	2,445,750	264.6	5,711,423	555.1
1947	3,404,773	390.0	7,452,785	724.3
1948	3,638,704	393.7	6,265,620	608.9
1949	3,736,510	404.2	6,595,620	641.0
1950	3,862,436	417.9	5,940,992	577.4
1951	3,601,633	389.5	7,685,478	746.9
1952	3,900,055	421.9	7,484,064	727.4
1953	4,397,743	475.7	7,261,434	705.7
1954	3,917,388	423.8	8,466,258	822.8

TABLE V

Year	Chicks Hatched	Chicks Not Sold	Chicks Exported	Chicks Imported	Chicks Remaining in Province
1951	7,685,478	205,396	176,133	839,026	8,142,975
1952	7,484,064	453,816	232,321	487,710	7,285,637
1953	7,261,434	397,280	241,384	454,757	7,077,545
1954	8,466,258	434,060	318,474	853,676	8,567,400

TABLE VI
CHICKS HATCHED BY BREED

	1952	1953	1954
S.C. White Leghorns	1,547,949	1,516,603	1,959,290
New Hampshires	1,832,305	1,548,907	1,605,400
Barred Plymouth Rocks	579,609	422,511	383,873
Rhode Island Reds	30,864	29,962	4,506
White Plymouth Rocks	503,191	528,471	710,829
Black Australorps		201,189	264,847
Light Sussex	1,418,429	1,533,148	1,579,723
Crosses	1,362,807	1,401,103	1,820,941
Miscellaneous	79,983	79,540	136,849

TABLE VII
PRODUCTION OF CHICKS

	1952	1953	1954
Breeder Hatcheries	9	12	10
Commercial Hatcheries	55	53	51
Chicks Hatched (Breeder)	161,060	127,645	159,512
Chicks Hatched (Commercial)	7,323,004	7,133,789	8,306,746
	7,484,064	7,261,434	8,466,258
Hatchability	66.8%	69.2%	70.4%

THE TURKEY INDUSTRY

The turkey industry was not in as strong a position in 1954 as in 1953, owing to an increase of production of 23% over 1953. The paying price for light and heavy turkeys was about 10 cents a pound lower than in 1953.

Despite the increase in production the turkey volume moved freely on the market with very little held in storage over and above normal estimate of requirements for trade during the spring and summer months.

Evisceration of turkeys increased considerably this year with 1,100,000 lbs., or 1/6 of the entire crop, being eviscerated compared with 255,000 lbs. in 1953. The demand for an eviscerated product by consumers in Alberta increased, and although approximately one-half million pounds were retained in the province the supply did not meet the demand.

The turkey approval and banding policy is being continued the same as in previous years.

TABLE VIII
SUMMARY OF TURKEY APPROVAL 1940-1954

Year	Flocks	Birds
1940-41	38	974
1941-42	43	1,078
1942-43	40	1,178
1943-44	63	1,461
1944-45	56	2,162
1945-46	79	3,475
1946-47	97	5,386
1947-48	95	7,384
1948-49	62	8,630
1949-50	80	15,000
1950-51	69	12,308
1951-52	62	12,587
1952-53	79	15,721
1953-54	65	16,677

TABLE IX
ANALYSIS OF POULT SALES

Year	Poults Hatched	Poults Exported	Hatchability
1952	527,893	11,116	46.2%
1953	449,226	9,337	53.2%
1954	606,118	8,383	53.5%

PROVINCIAL POULTRY PLANT

The Provincial Poultry Plant at Oliver, consisting of fifty-three acres, is operated as a practical poultry breeding and demonstration unit. The flock at the present time consists of 1,850 S.C White Leghorns and 350 New Hampshires. There are twelve individual breeding pens of Leghorns and nine individual breeding pens of New Hampshires. The breeding plan, operating under the Canada Record of Performance Policy, continues to be one of the largest in Canada.

Foundation stock of these two breeds is disseminated throughout the province by sale of chicks and mature birds to the Alberta Hatchery Approval flock owners.

This season a test was made of the nickability of two strains of Leghorns, our own Oliver strain with that of another breeder. The results to date are satisfactory in that hatchability was close to 90% on all eggs set. The livability of the progeny is good and the culling of pullets light. A pen of this cross strain is being kept and

records of laying house mortality, production, etc., are being made to complete the analysis.

Various management practices are tested each year. This past season the practicability of feeding of pellets to pullets on range by a mechanical spreader was tried. The results, under our conditions, justify expansion of this practice. This procedure is recommended only where size of poultry enterprise is sufficient to warrant it.

TABLE X
SUMMARIZATION OF HATCHING AND SALES OF STOCK

	S.C. White Leghorn	New Hampshire
Hatched:		
Pedigree Chicks	5,474	2,013
Pullet Chicks	5,010	
	10,484	2,013
Sold:		
Pedigree Cockerel Chicks	446	790
Pullet Chicks	1,234	
	1,680	790
Mature Males	44	
Mature Females	1,550	500
Hatching Eggs	675 doz.	1,470 doz.
Hatching Eggs, (W. Leghorn x N. Hamp)	575 doz.	

POULTRY DISEASES

Some cases of Newcastle Disease occurred again this year—the first since 1952. In addition, a combination of a respiratory disease condition, chronic respiratory, and infectious bronchitis has seriously affected the flocks of many producers.

Live virus vaccines (Blacksbury strain) for Newcastle disease and a vaccine for Infectious Bronchitis were made available for the control of these diseases. Dr. Ballantyne will no doubt deal with these and other poultry diseases in his report as Veterinary Director.

STAFF ACTIVITIES

Flock reinspections and producer service calls involved considerable time of the Poultry Branch staff. The Poultry Commissioner and/or members of the Poultry Branch staff attended meetings of poultry producers, turkey breeders, produce dealers, feed dealers, hatchery operators, committees dealing with poultry problems, etc., during the year.

Short courses, culling and caponizing demonstrations, judges for poultry shows, 4-H Club Achievement Days as arranged by the Extension Branch were attended by members of the Poultry Branch staff.

A Junior 4-H Poultry Club team went to the Toronto Royal Winter Fair. Staff members spent considerable time assisting the District Agriculturist in coaching the team.

A conference of members of the Poultry Branch, Canada Department of Agriculture poultry inspectors, and temporary inspectors was held in August. Addresses were given by Dr. D. R. Clandinin of the University of Alberta; Dr. C. H. Bigland, Provincial Veterinary Laboratory; Mr. W. K. Barr, Canada Department of Agriculture; and the Poultry Commissioner.

Report of the Apiculture Branch

W. G. leMAISTRE, Provincial Apiarist

J. W. Edmunds, Supervisor of Apiary Inspection

Honey production in Alberta this year was 2,501,000 pounds. This is 35% less than in 1953. The drop in total honey production resulted from a decrease in the yield per colony. The average yield per colony was only 74 pounds as compared to last year's yield of 124 pounds per colony and an average over the past ten years of 107 pounds.

There were 33,800 colonies of bees operated this year. This was nearly 3,000 or 9% more than in 1953. It is the first year since 1947 that no decline in numbers of colonies was recorded.

Further commercialization or specialization has taken place. The number of colonies per beekeeper has increased from twenty last year to twenty-six. At the same time the number of beekeepers has declined from 1,600 to 1,300.

Continued interest is being shown by growers of legume seeds in having colonies of bees placed in clover fields. The demand for colonies for pollination was less this year than in the preceding year.

GENERAL

Most hives are stocked with package bees imported from the United States. The average cost of these bees varied from \$4.00 to \$5.50 per two pound package and queen delivered in Alberta.

Relatively few colonies are wintered in the province. Only 2,170 (7%) of the 1953 colonies were put into winter quarters in the fall of that year. Of these 790 (36%) died.

This Branch has worked with several producers on this problem and demonstrated methods of keeping colonies over winter. It seems however, that whether to keep the colonies or not becomes one of personal preferences. Unless supplies of packages become limited or relatively expensive it is not likely that any considerable change-over will be undertaken.

A. C. Bradley, Athabasca, Alberta, won second prize at the P.N.E. and one award at the Royal Winter Fair, Toronto. Louis Regamey, Edmonton, Alberta, won two prizes for honey and one for beeswax at the Toronto Royal Winter Fair.

SEASON

Meteorological reports for Edmonton for 1954 show that during April, May and June there was 20% less bright sunshine than normal. Mean temperatures were ten degrees below normal for April and three degrees below normal for May and June—precipitation was 68% above normal for May.

Early April weather was ideal for establishing packages of bees in their hives. Soon, cold and snow was common over the province and beekeepers had great difficulty in establishing colonies and

building them up to strength. So persistent was the inclement weather that extra feeding was required. This operation was often difficult to accomplish and sometimes neglected.

The weather was reasonably favourable for the storing of honey in July. However the retarding effect of the weather in the previous months had left colonies below the strength necessary to take full advantage of it. By the time colony strength was adequate in August the weather had deteriorated. Bright sunshine was 45 % below normal and precipitation more than double the normal during August.

MARKETING

This Branch has surveyed the supply and market situation and has provided information to producers and marketing groups.

The most significant feature in marketing has been the supply situation. The short crop of this year with no carry-over from the previous year has necessitated the importation of honey from the United States in order that the market developed for honey might not be permitted to languish too greatly.

Packaging in smaller containers is a continuing trend.

Wholesale prices of honey by the end of the year were about 15% higher than one year ago. This increase is partly increased freight, packaging and processing costs and partly increased returns to the producers. The price to producers averaged about 10% above last year's.

HONEY INSPECTION

Producers and packers are required to grade and mark all containers of honey entering regular trade. Inspection of the honey is carried out with assistance of the Canada Department of Agriculture Inspection Service.

	1953	1954
Number of Lots Inspected	1,611	1,753
Number of Containers Inspected	15,102	25,486
Number of Containers in Violation	3,253	72

Most of the violations were due to improper markings. The other violations were for poor condition of the honey and both were imported lots.

Producers, uncertain of the class and grade of honey they have, may obtain this information by sending representative samples to this Branch. Laboratory tests were made on 60 samples and graded as follows:

27 White No. 1
15 White No. 2
18 White No. 3

EXTENSION

Close contact, through the inspection service and meetings is maintained between beekeepers and this Branch. Circular letters, bulletins, radio talks and correspondence, also press notes, are used to distribute general and timely information on beekeeping.

Courses of lectures are given to students at agricultural schools, at the beekeepers convention and short course. Fourteen bee inspectors are kept informed of policies and developments and instructed in ways they may be of service.

Any new developments in beekeeping practices are made public to the industry.

DISEASE CONTROL

Investigations, during the past two years, in the use of drugs for disease control resulted in a marked change in disease control policies this year. These investigations and experiments conducted at the experimental apiary at Oliver have proved that the use of sulfa drugs is more effective in the control of American foulbrood and less costly than the previously used sterilization methods. The use of terramycin and streptomycin proved to be effective against European foulbrood.

Fourteen part-time inspectors were appointed this year under The Bee Diseases Act. The responsibilities of the inspectors have changed somewhat with the advent of the use of drugs in disease control. Inspection of colonies remains necessary. When disease is found it is the duty of the inspector to instruct the beekeeper as to the proper administration of the recommended drug. A second inspection is necessary to determine the efficacy of the treatment.

	1953	1954
No. of colonies inspected	9,267	8,272
No. of Apiaries inspected	451	387
No. of colonies diseased (AFB)	497	291
No. of colonies diseased (EFB)		650
Percentage of colonies inspected	28%	25%

The percentage of colonies infected by AFB (American foulbrood) declined from 1.6% to .86% in 1954. This was due largely to the amount of diseased equipment melted and sterilized in previous years by the wax melting unit. Large sources of infection have been eliminated. Feeding of drugs has prevented any outbreaks of disease from spreading up to this time.

Serious outbreaks of EFB (European foulbrood) occurred in several localities this year. Previously EFB was not considered a serious disease, but what appears to be a more malignant type has caused considerable losses. The cause of the outbreak has not been determined. It is presumed that either the present strain of Italian bees is less resistant to the disease or a new variety of EFB disease has developed. The disease spreads rapidly from one hive to another, and through the hive.

Unless it is recognized and checked soon after it appears the colony population is very adversely affected and honey production greatly reduced.

The outbreak of EFB has made it necessary to inspect colonies earlier and more regularly.

This Branch very fortunately had investigated the use of terramycin for controlling EFB and had located a source of supply of the drug. When the outbreaks occurred a supply of terramycin was on hand.

The percentage of colonies infected with EFB was 1.9% of the total. Cases of EFB were not previously recorded due to the fact it was not considered a malignant disease.

Correct diagnosis of disease in the field is not always possible. A laboratory is maintained by this Branch for making microscopic analysis of suspected disease samples. If disease is present the

sender is notified of the disease present and the recommended treatment. The following samples were forwarded by beekeepers:

Samples containing AFB spores	28
Samples containing EFB spores	14
Samples containing no disease	17

In order to facilitate the issuance of moving permits as required by The Bee Diseases Act, a map is maintained on which locations of apiaries are recorded. This map serves a dual purpose in that it makes it possible to regulate any tendency to overcrowding or encroachment of any beekeeper on a previously established site. By keeping apiaries a reasonable distance apart the spread of disease is reduced.

The following number of permits were issued:

Permits to sell	7
Permits to move	7
Out-apiary permits	54

INVESTIGATIONS

Production Test:

This test was started in 1952 to try to determine the most suitable date for arrival of package bees. The 1952 Annual Report gives the details of methods used.

The arrival dates of the test packages this year were April 3rd and April 24th.

The table below indicates the percent by which one group exceeded the other in honey production:

	1952	1953	1954
Early	36 %		15 %
Late		*21 %	

*See 1953 Annual Report, page 132.

Methods of Application of Sulfa Drugs:

In order to facilitate beekeepers using sulfa drugs for disease control it was deemed necessary to find a more practical method of application. The recommended method had been to feed colonies medicated syrup. This system proved unsatisfactory due to the following factors:

1. During honey flow periods bees did not use the medicated food.
2. Beekeepers were too busy at certain seasons to treat colonies.
3. The method generally was too time consuming.

Fourteen colonies in the experimental apiary at Oliver were inoculated with AFB spores at the time packages were installed. When the disease had been well established in all colonies one teaspoonful of a mixture of icing sugar and sodium sulfadiazine (3-1) was blown by an insecticide gun into each colony. The dosage was placed on a paper at the entrance of the hive.

All colonies were heavily infected with disease (AFB) at the time of treatment. Three weeks after treatment only one colony had any visible signs of infection (one cell). Ten weeks later a few cells of disease remained in this colony. It should not be assumed this one treatment has eliminated all the disease in one year. The method of application appeared to be entirely satisfactory.

Colonies can be treated at the approximate rate of one colony per minute.

Field tests using this method were conducted in commercial apiaries in three different districts in the province. These produced similar results.

STATISTICS

	1953	1954
Honey Production ('000 lbs.)	3,861	2,501
Average net price to producer (cents)	14	15
Value of honey (dollars)	540,540	375,180
Value of beeswax	23,000	18,000
No. of beekeepers	1,560	1,300
No. of hives	31,120	33,800
No. of hives per beekeeper	20	26
Production per hive (lbs.)	124	74

Report of the Fur Farms Branch

J. KOKOLSKY, Fur Farm Supervisor

General

Mink represent 98% of all animals maintained on fur farms. A desirable change-over from standard mink to mutations has taken place. In 1953 32% of the mink were mutations, while in 1954 this increased to 45% of the mink. This change may be readily explained by comparing the average value of pelts—mutations \$22.00, standard \$14.00. Another factor aiding the change is undoubtedly the greater availability of breeding stock. In 1953 standard mink retained for breeding exceeded mutations by approximately 7,000 animals. In 1954 mutations exceeded standards by approximately 4,000.

The total number of animals pelted was 15% less than in the previous year. However, since the average value per pelt was higher, the value of pelts was only 9% less than in the previous year.

There was a marked rise in the number and value of live animals exported from Alberta. (1953—\$69,000.00, 1954—\$136,000.00)

There were 119 fewer licensed fur farmers than in the previous year. This represents a decline of 13%. However, the number of animals maintained declined by only 10%. The trend towards larger individual operations, as noted in previous reports, is continuing.

Breeding Stock

64,233 animals were retained on fur farms as breeding stock. This is an increase of 4% over the previous year. Of the mink retained 53% were mutations and 47% were standards.

There has been a definite improvement in the quality of breeding stock. A herd improvement programme was undertaken by this branch. By means of bulletins, correspondence, educational field days and personal inspection of ranches, the fur breeders were given guidance in breeding, stock selection, and advised regarding the most desirable types to raise. The genetics of mink breeding were illustrated with charts and tables. This enabled ranchers to make the proper use of selected varieties necessary to the production of the more valuable pelts.

The increased average value of pelts and exported animals attests to the success of this programme. With continued guidance there is every indication that the quality of Alberta Ranch Mink can be further improved to be at least equal to those produced anywhere.

Prior to the institution of this programme, new mutant mink were imported from the United States. This situation is being reversed, at least one new mutation is being exported to the United States. Exports are also moving to England and the Scandinavian countries.

Alberta raised mink have won major awards at leading national and international shows.

Extension

Apart from issuing timely bulletins, conducting correspondence and making ranch inspections, the Fur Farm Supervisor organized local Field Days and Field Day Meetings in various fur-ranching areas in the Province. Field Days and Field Day Meetings were held at Medicine Hat, Calgary, Lacombe and Red Deer, Faust, Widewater, Lac La Biche and Wabamun.

Besides the Fur Farms Branch Supervisor, the following men went on the Field Day Tour:—

Mr. N. L. Boyd, Vice-President of Little Bros. Fur Sales Agency, Vancouver, B.C., who judged the mink classes and spoke on factors affecting marketing and markets.

Dr. J. G. O'Donoghue of the Veterinary Services Branch who enlightened the ranchers on the disease aspects of mink ranching.

Messrs. J. J. Horne, J. N. Cawsey, H. J. Montgomery, D. R. Fraser and J. T. Jones, who represented the Alberta Fur Breeders' Association. These men spoke on matters pertaining to the Association and stressed particularly the importance of a strong association.

This Branch was in charge of all Field Day arrangements. Slides and films depicting the various color phases of the newer types of mink were shown. The genetic factors involved in their production were explained. Correct methods of preparing pelts for market were carefully demonstrated.

The Field Days have been carried out for several years. This year without a doubt, judging from the increased attendance and general comments by the ranchers, it is evident that they will continue to be popular and beneficial to the industry.

Live Mink Show

Alberta Fur Breeders' Association Seventeenth Annual Live Mink Show was held in Calgary, November 17 and 18. This branch takes an active part in aiding the association with this show.

Western Canada and Western United States were represented in the 450 entries. Judges commented on the improved quality of the mink, noting that Alberta was a leader in mutation mink.

Health

Diagnosis and advice to fur farmers on diseased animals is available through the Veterinary Services of the Department.

There were only 18 cases of distemper outbreaks reported on fur farms this year compared to 24 cases in 1953. The general health was good as the report on Veterinary Services shows. Some cases of food poisoning, nursing sickness and nutritional anaemia were among conditions diagnosed from animals sent to the Laboratory.

Feed

Feed continues to be a very pressing problem, even more so now that the price of horsemeat has taken a further increase to almost a prohibitive level. Unless cheaper sources of feed supply

are found there is every indication that there will be a further decrease in the number of active fur ranchers in this Province.

A new bulletin on Economical Feeding of Mink written by J. Kokolsky was made available to every rancher in the Province. Cutting of feed costs through greater use of supplements and packing house by-products can relieve the situation to some extent.

Controlled feeding experiments were conducted with conclusive results. This information was passed on to the ranchers by bulletins and Field Day Meetings.

Associations

One noteworthy achievement in fur ranch associations is the formation of the "Canada Mink Breeders' Association", a national organization formed to look after the interests of the ranch fur industry in Canada.

A plan was formulated and put into effect whereby a 1% deduction was to be made from sales of mink pelts by all members. The funds thus derived have been advantageously used to sponsor, promote and advertise ranch mink throughout the fashion centres of Europe, South America and U.S.A. Fur Fashion Shows were held at International Trade Fairs on continental Europe. This small beginning has already paid dividends in opening up new markets. The President of this national organization is Kenneth G. Montgomery, prominent in Alberta fur ranching circles.

Mr. Montgomery has taken an active interest in the Alberta Fur Breeders' Association for several years and we feel confident that he will serve the fur industry very capably in this new capacity.

Marketing

The market for mink pelts was, on the whole, good. Prices were somewhat improved, about 15% over last year, and the demand was excellent, particularly for most mutations. Whites and silver blues were exceptions, being in poorer demand.

FUR FARM STATISTICS FOR YEAR ENDING AUGUST 31st, 1954

NUMBER OF ANIMALS DECLARED ON FUR FARMS IN ALBERTA 1953-54

Kind of Animal	Total No. of Animals	Average Value Per Animal Sept. 1/53	Total Valuation
Mink, Standard	107,898	\$ 14.00	\$1,510,572.00
Mink, Mutation	89,181	22.00	1,961,982.00
Fox, Silver	1,497	9.00	13,473.00
Fox, Cross	Nil		
Fox, Red	Nil		
Fox, White	1	12.00	12.00
Fox, Blue	28	8.00	224.00
Marten	46	16.00	736.00
Chinchilla	2,627	36.00	94,572.00
	201,278		\$3,581,571.00

NUMBER OF ANIMALS PELTED ON FUR FARMS IN ALBERTA 1953-54

Kind of Animal	Total No. of Animals	Average Value Per Animal Fall 1953	Total Valuation
Mink, Standard	78,907	\$ 14.00	\$1,104,698.00
Mink, Mutation	55,704	22.00	1,225,488.00
Fox, Silver	741	9.00	6,669.00
Fox, Cross	Nil		
Fox, Red	Nil		
Fox, White	1	12.00	12.00
Fox, Blue	12	8.00	96.00
Marten	7	16.00	112.00
Chinchilla	198	36.00	7,128.00
	135,570		\$2,344,203.00

NUMBER OF LIVE ANIMALS EXPORTED FROM ALBERTA 1953-54

Kind of Animal	Total No. of Animals	Av. Value Per Animal	Total Valuation
Mink, Standard	212	\$ 50.00	\$ 10,600.00
Mink, Mutation	993	100.00	99,300.00
Fox, Silver	Nil		
Fox, Cross	Nil		
Fox, Red	Nil		
Fox, White	Nil		
Fox, Blue	Nil		
Marten	Nil		
Chinchilla	270	100.00	27,000.00
	<u>1,475</u>		<u>\$ 136,900.00</u>

NUMBER OF ANIMALS RETAINED FOR BREEDING STOCK IN ALBERTA 1953-54

Kind of Animal	Total No. of Animals	Av. Value Per Animal Dec. 31/53	Total Valuation
Mink, Standard	28,779	\$ 20.00	\$ 575,580.00
Mink, Mutation	32,484	40.00	1,299,360.00
Fox, Silver	756	25.00	18,900.00
Fox, Cross	Nil		
Fox, Red	Nil		
Fox, White	Nil		
Fox, Blue	16	15.00	240.00
Marten	39	25.00	975.00
Chinchilla	2,159	100.00	215,900.00
	<u>64,233</u>		<u>\$2,110,955.00</u>

FUR FARM LICENSES 1953-54 SEASON

Mink	627	Marten	1
Mink and Fox	14	Chinchilla	105
Mink, Fox and Marten	1		
Mink and Marten	5		
Fox	10		
			<u>763</u>

Report of the Water Resources Branch

F. L. GRINDLEY, Director of Water Resources

Speaking in a general way, the year 1954 could be described as a "wet" year. In the spring a general heavy rain coinciding with the snow melt produced some new "all time" high flows in some of our streams. Then in August some rain of cloudburst proportions produced more record flows, and what was worse, a great deal of ponding of water scattered over a large area. This ponding of water produced considerable hardship to many farmers. Low lying areas which had been dry for years were flooded. In desperation many farmers constructed ditches which in many cases only aggravated conditions for their downstream neighbors.

River control works on the Oldman and Highwood Rivers stood up well and the corrective works carried out on the Lethbridge Northern Diversion Works in 1953 functioned very well. Some erosion occurred on the McLeod River near Rosevear and this is believed to be the first occurrence of damage in this area. The Pembina River went on the rampage and caused much damage in the Manola-Jarvie section of the river. Studies are being made to see if some of the floods could be controlled by headwater storage.

Our engineers were called on to inspect many complaints regarding drainage. In the Edmonton area it was impossible to keep up with all of the complaints.

Some of the lakes rose to new high levels and caused considerable pressure to canalize the outlets of them. These demands will have to be carefully investigated to ascertain if they are in the public interest. Lakes have a natural function to perform in holding back flood water and it would be unfortunate if these functions were destroyed or impaired.

The extension of the Heart River project resulted in water being taken to the Town of McLennan and this makes water also available to the Falher-Girouxville area. The approximate cost of this work was \$60,000.00.

River control work was carried out on the Crowsnest River at Blairmore and Frank at a cost of about \$52,000.00.

Work was continued on the distribution system of the St. Mary-Milk River Development and the Western Block of the Bow River Project. Separate reports are to be added hereto covering these major projects. A separate report will also cover work in connection with hydro-electric power development.

The irrigation projects were all well served with water but due to widespread rainfall the demand for irrigation water was relatively light. The growth in water usage by the City of Edmonton for domestic and industrial use continued and consideration is to be given to the construction of a storage dam on the North Saskatchewan River to increase the low flow of the river.

Surveys are being conducted by private engineers for a dam on the McLeod River at Edson for a pulp mill water supply.



Heart River Dam

Tentative plans call for a fairly large concrete dam to impound some 25,000 acre feet of water.

The Manawan Drainage District at Morinville was improved and extended and to assist the District a government loan of \$27,000.00 was negotiated to aid in extensions of the ditch system. The Holden and Daysland districts carried out ditch cleaning programs. Construction work was carried out on the Cameron Drainage District at New Sarepta and on the Bearhills Drainage District (west of Wetaskiwin).

On the Bow River at Canmore an old rock and timber crib was replaced in order to keep the river from following low ground on the left bank. This work protects the eastern part of the Town of Canmore as well as important access roads.

Enlargement of the main canal of the Leavitt Irrigation District was carried out by the P.F.R.A. in order to assure an adequate water supply for the Aetna District.

An important wild life conservation project was built at Hay Lakes in the extreme north-west part of the Province. This area experienced a severe drought in sharp contrast to the rest of the Province.

Supplies of ground water are reported to be at a favorably high level. Many towns and villages constructed water and sewage installations. The water supply came chiefly from ground water but some surface water supplies were utilized. Drillers on ground water were licensed in 1954 and a considerable number of inspections were required in connection with artesian flow.



Erosion in road ditch near Grande Prairie

St. Mary-Milk River Development Construction Report

During the 1954-55 season twelve construction contracts were awarded on the St. Mary-Milk River Development. These were mainly for the completion of the Bow Island Distribution System and the Medicine Hat Distribution System.

With the exception of the Chin Dam all 1953-54 contracts have now been completed. Due to an extremely poor construction season only two of the new contracts have been completed. The remainder of this work will be carried into the 1955 season.

For the first time water was delivered to the farmers in the Medicine Hat area and some irrigated crops were produced. With the completion of contracts already let, some 187,000 acres of irrigable land will be served.

This year saw two major failures during the irrigation season. The chute into Raymond reservoir and the chute into Chin reservoir failed. Construction is proceeding on the repair and replacement of these structures. There seems to be a difference of opinion as to the actual cause of the failure but it has mainly been attributed to a weakness in the design. However, it is not believed that the failure could, in any way, be blamed on the competence of the design engineers but rather on some factors which normally do not receive much consideration in the design of this type of structure. These structures should be repaired ready for next year's service. Due to the wetness of the season little damage to irrigation crops resulted from these failures.

During the next season, 1955-56, all construction under the low line canal should be completed and a major portion of the part already constructed including the main canal from Ridge to Seven Persons should be turned over to the St. Mary-Milk River management.

With regard to the Chin Bridge crossing Chin Coulee south of Taber, progress has been slow but satisfactory and it should be completed by June 1, 1955. The contractor has been asked to build both approach roads to the valley at the request of the Department of Highways.

Attached is a table showing the expenditures to date by this Department on the St. Mary-Milk River Development.

YEARLY EXPENDITURES ON ST. MARY-MILK RIVER DEVELOPMENT

1949-50	\$ 94,762.23
1950-51	1,682,517.42
1951-52	2,367,016.64
1952-53	3,907,921.62
1953-54	3,282,309.06
1954-55	3,309,590.00
	\$14,644,117.07

Bow River Development Project

The construction phase of this project was started in the late fall of 1953 when Contract No. 1 was let. This contract covering Distributary "A" in the amount of \$116,838.00 was completed in July 1954. The irrigable area in this distributary system is approximately 6,000 acres and is now ready for operation.

In addition to the completion of Contract No. 1, the following contracts were let:

1. Contract No. 2—Distributary B	\$247,415.50
2. Contract No. 3—Distributary C	94,944.00
3. Bridge Contract No. 1	93,254.96
4. Headquarters Building Contract	18,904.00
	\$454,518.46

The work on these contracts with the exception of a period of inclement weather in August and September progressed in a satisfactory fashion.

It is anticipated that the contracts for the bridges and the office building will be completed by the end of this fiscal year. The contracts for Distributaries B and C should be completed by July 1955.

The irrigable acreage under Distributaries A, B and C is approximately 22,000 acres. This area will be ready for testing and operation by August 1955.

The construction program for 1955 calls for approximately ten miles of construction of the Lomond main canal, distributaries D and E and all pertinent structures and bridges. It is also the intention to construct three ditch rider houses and an adequate communications system.

A winter survey is being carried out, classifying irrigable areas and locating proposed drainage canals.

Water Power etc.

Calgary Power Limited completed its Bearspaw development on the Bow River a short distance west of Calgary, the plant comprising a 20,750 h.p. turbine under 48-foot head driving an 18,000-kva. generator. The Company also brought into operation a third unit of 30,000 h.p. with 23,500 kva. generator in its Ghost plant further upstream; the plant operates under 92 foot head and total capacity now is 96,000 h.p. In addition, construction has been undertaken for 1955 operation on two new developments on the Kananaskis River, 6,900 h.p. at Upper Kananaskis Lake and

18,500 h.p. at the Pocaterra site below Lower Kananaskis Lake. During 1954, the transmission system of the Company was extended by the building of 142 miles of line at 66 kv. and 114 miles at lower voltage and by the purchase of an additional 14 miles from Northland Utilities Limited. In addition to water-power development, the Company has under construction for 1956 operation a steam-turbine plant at Wabamun with a capacity of 66,000 kw.

The planned addition of a new unit of 1,000 h.p. in the Astoria hydro-electric plant at Jasper of Canadian Utilities Limited has been postponed for the time being; also a proposed development on the Heart River is still only in prospective stage. The Company installed a 6,000 kw, gas turbine unit at Vermilion and, in co-operation with Northland Utilities, added two 1,250 kw. diesel units to the plant at Fairview. The transmission system was extended by 70 miles of 69-kv. line between Drumheller and Stettler and 30 miles between Rycroft and Fairview.

The City of Lethbridge enlarged the generating capacity of its steam plant by 13,500 kw. by installing a new unit.

It is estimated that nearly 30,000 farms in Alberta are now receiving electrical service, about 22,000 from Calgary Power Limited, 7,000 from Canadian Utilities, and the remainder from other sources.

Report of the Agriculture Extension Service

F. H. NEWCOMBE, Director, Extension Service

S. S. Graham, Supervisor of District Agriculturists

Mrs. V. G. Macdonald, Supervisor, Women' Extension

Miss B. J. Lewis, Extension Nutritionist

To be appointed, Extension Home Designer

C. A. Cheshire, Extension Engineer

R. E. English, Statistician

C. J. McAndrews, Extension Irrigationist

STAFF

The only change in staff during the past year results from the resignation of Miss Caroline Judson. An effort is being made to find a new appointee.

AGRICULTURAL SOCIETIES

One new Society was organized this year at Mayerthorpe. The Society at Smoky Lake, organized in 1920 as the Warspite Agricultural Society, was disorganized by Ministerial Order.

The season was quite unfavorable for many of the activities normally conducted by these Societies and several of them were cancelled because of bad weather. There are now 45 Agricultural Societies as of record at the close of 1954. Of these, 6 conducted "B" Class Fairs, 19 conducted "C" Class Fairs and one Fair was cancelled.

Activities other than Fairs conducted by Agricultural Societies are as follows:

Tillage Competitions	2
Livestock Sales	3
Seed Fairs	3
Horticultural Exhibitions	2
Farm and Home Improvement Programs	4
Junior Club Display Competitions	2

FARM LABOUR

General

An extremely wet season, coupled with the farmers' shortage of cash as a result of failure to market all of the 1953 crop, have, perhaps, been the most important factors in a general lessening demand in the farm labour field. Against this somewhat lessened demand has been the rather higher than usual supply from the unemployed pool. At no time has there been any acute situation or any demand which could not be supplied.

Seasonal Movements

(a) Ontario Farm Workers

Recruiting of farm workers for the Ontario haying and harvest is not becoming easier as the years go by. It is doubtful that opportunities in industry had much effect on this recruiting this year. The delayed seeding and general farm work situation in the Province did, however, militate against recruitment.

(b) Prairie Farm Workers

Following two seasons of exceptionally smooth and easy administration, the movement this year was somewhat tricky. The situation was complicated somewhat by the fact that Manitoba and Saskatchewan were not in the field this year and their cushioning effect was absent when more workers came forward than could be immediately placed. A repetition of old experiences was evident in the peaks of supply and demand. This is reflected in the fact that the amount of subsistence required to be provided for indigent workers for whom employment could not immediately be found, is, perhaps, the highest in history. The only other explanation would be that the general level of prosperity of this type of worker in Ontario was somewhat lower than usual. In any case, more workers appear to be indigent. Wages were maintained at about the same levels as in recent years.

(c) Alberta Harvesters

Notwithstanding the relatively high level of unemployment, an appreciably smaller number of these are recorded than was the case last year. It is, however, quite possible that many of the unemployed sought employment on their own behalf. It was not necessary to resort to any special radio or advertising appeals.

(d) Berry Pickers

This movement went off quite smoothly with a somewhat higher number of women and girls having been recruited for this work. It is believed that the policy of having the girls despatched directly from local country offices facilitated recruitment.

Sugar Beet Works**(a) Immigrants**

We record this year the smallest number of immigrant workers of any season since the close of the war. The total of these, including church sponsored is 460 souls in 139 families. The general level of acceptability was about equal with previous years.

(b) Indians

The smaller number of immigrants available this year necessitated recruitment of beet workers from other sources. A few undoubtedly went out from the unemployed pool but the number of these is not known. The source which seemed obvious was that of Indians on reservations. Accordingly, representatives of National Employment Service and the Sugar Factory proceeded to reservations in Northern Alberta and were successful in recruiting 110 workers. The groups sent forward totalled 135 souls, the difference being wives and families.

The general conduct of the Indians was good and their acceptability as sugar beet workers was fair to good. Some growers would not accept them this year but it is believed that on the basis of this year's experience only a very few will refuse to accept them in future if they are offered.

Mechanical operation in sugar beet fields continues both to assist and embarrass the labour situation. Undoubtedly it assists to some extent in speeding up the work, and with equal certainty

it embarrasses in reducing the income of the hand labourer. The total number of machine harvesters reported to be operating in Alberta fields in 1954 was 245 as against 201 in 1953, and of windrowers, 54. The estimated average capacity per machine harvester is 600 tons.

General Farm Workers

This Province did not this year participate in the movement of single German workers. In other respects, this situation was quite similar to previous years.

Custom Combines from U.S.A.

The number of these this year shows a sharp reduction from 40 in 1953 to 5 in 1954.

Statistical Review

The following statistics reflect in terms of numbers the activities in the various fields dealt with above.

1	General Farm Labour	1953	1954	
	(a) Requirements	853	935	
	(b) Placements (Prov.)	841	704	
	(NES)	5,024	1,701	
	Total			3,340
2	Seasonal Movements			
	(a) Ontario Farm Workers	132	146	
	(b) Prairie Farm Workers (Placed)	655	613	
	Prairie Farm Workers direct to own placements	165	*	
	(c) Alberta Harvesters (Prov.)	856	333	
	(NES)	2,154	196	
	Total Harvesters			1,288
	(d) B.C. Berry Pickers (Prov. and NES)	64	128	
	Total berry pickers			128
3	Sugar Beet Workers			
	(a) Immigrants	1,000	460	
	(b) Indians	Nil	110	
	Total sugar beet workers			570
4	German Farm Workers	108	Nil	
	TOTAL WORKERS			5,326
5.	Investigations and Transfers	663	205	
6	Custom Combines from U.S.A.	40	5	

*Not known.

MASTER FARM FAMILY PROGRAM

In this, the sixth year of operation of this program, 31 farm families were nominated. The following list of those declared by the Minister for the year 1954 brings to 29 the total of those who have been declared since the beginning of the program:

Martin Arndt Family, Barrhead, Alberta
 Harlie H. Conrad Family, Clairmont, Alberta
 Adam Buyer Family, Carbon, Alberta
 William Storch Family, Garden Plains, Alberta
 Ansley Kink Family, High River, Alberta

NAMES OF HOMES ACT

Thirteen names were registered during 1954, the total number of registrations under this Act now being 243.

PUBLICATIONS

A total of over 200,000 publications on agriculture and home-making were distributed during 1954. Publications printed or reprinted during the year are shown hereunder:

- Diseases of Suckling Pigs
- Infectious Rhinitis
- Your Cream Test Goes Up and Down
- Hay and Pasture Crops for Alberta
- Vegetable Varieties Suitable for Freezing
- Weed Control with Chemicals
- Rat Control in Alberta
- Plans for Irrigation Structures
- Protect Your Family
- House Flies and Their Control
- Hay and Pasture Mixtures
- Wild Rose Hips for Vitamin C
- Dressing and Curing Pork
- Dairy Barns for Alberta
- Department of Agriculture—Its Functions and Services

AGRICULTURAL ENGINEERING

During the summer and fall of 1954, agricultural engineering activities were limited by weather to the extent that only 22 of the 65 scheduled tillage events, and none of the 6 planned harvesting demonstrations were conducted. Illustrated talks and discussions were substituted for the field work at practically all of the centres where it was too wet to hold the field demonstration.

Some phase of agricultural engineering was presented at 70 meetings and short courses, and these, together with the field days and demonstrations, totalled over 100 public gatherings with aggregate attendance exceeding 8,000. In addition to public meetings, 137 farm visits were made and 55 calls were made at District Agriculturists' Offices. Correspondence increased to a new high of over 625 letters and the popular topics of farm buildings, machinery, and water and sewage each accounted for approximately one-sixth of the total. Fourteen releases from this office appeared in Farm Notes, and fifteen radio talks, eight over Call of the Land, were given during the year.

During the early months of 1954, material was assembled and drawings made for the Beef Building and Equipment Bulletin. This publication, the first achievement of the Canadian Farm Building Plan Service, is expected to be ready for distribution early in 1955.

Drawings and plans were made for a bulletin on Potato Storage Root Cellars, and this material, prepared by the Potato Production Improvement Committee, is now ready for publication. In addition, several plans or illustrations were prepared for other branches of the Department, either for inclusion in publications or to be used separately.

Three building demonstrations were held during the fall. At each of these a round plywood granary was built to illustrate both the ease of construction and the low cost of this new type of construction.

The safety program was highlighted by "Operation Tractor", which this year was held at Berwyn and Ponoka as well as five days at the Edmonton Exhibition. The event has very good spectator appeal and, at the same time, vividly illustrates the importance of safety practices and alertness.

Rural Electrification Schools, having been shortened from two weeks to one week, are now being handled by the Extension Branch. Courses have been organized in fifteen centres throughout the Province. Three of these were held before Christmas and the remainder will be conducted in the first three months of 1955. Average daily attendance at the first three courses was just under 50.

To help take care of the steadily increasing demand for agricultural engineering assistance, the position of Assistant Agricultural Engineer was created, but to date has not been filled. As soon as an assistant can be located a considerable increase in service from this office will be possible.

FARM WATER SUPPLY ASSISTANCE POLICY

Following the upward revision of the subsidy in 1953 from 5 cents to 6 cents per cubic yard and the maximum from \$100 to \$120, the regulations under this policy were reprinted during 1954. The number of dugouts subsidized this year was 95, which brings the total under this policy since its inception in 1945 to 2,256.

STATISTICS

General

The Statistics Division co-operates with the Agriculture Division, Dominion Bureau of Statistics, in preparing estimates on agricultural production and value. Existing arrangements have grown out of many years' experience but constant adjustment to new circumstances or requirements is still necessary.

Again in 1954 (December 2nd and 3rd) the Agricultural Statistician attended a Dominion-Provincial Conference on agricultural statistics held in Ottawa. Matters in connection with the 1956 census of agriculture, the crop reporting program, new methods of conducting the June survey crop acreages and live stock numbers, and other matters were discussed. It is proposed that the major emphasis at the 1955 conference be on Farm Finance statistics.

A single questionnaire distributed to all farmers has been used (since 1918) as a basis for making the June agricultural estimates. In 1954, however, Alberta jointed with the Dominion Bureau of Statistics in testing a "split" questionnaire; i.e. questions on crops and poultry on one questionnaire and questions on live stock numbers on another. The mailing list of farmers was then divided so that any one farmer was sent only one questionnaire. The response to the shorter lists of questions was so good, the new method will likely be applied in all three Prairie Provinces in 1955.

This Department also undertook, through the co-operation of the District Agriculturists, to conduct a field follow-up of a sample of non-respondents to the crop and poultry survey for the purpose of evaluating possible bias arising from non-response to mailed

questionnaires. The results of this "pilot" survey are not yet available.

Again this year, ten crop reports and an autumn survey of production were issued. In addition, thirteen summaries of crop conditions were prepared at regular intervals for use in crop reports published by the Dominion Bureau of Statistics. In this connection we wish to acknowledge the contribution of crop correspondents without whose co-operation this work could not be done.

Beginning, in January 1954, statistics on agriculture in Alberta were prepared for publication in the "Summary of General Statistics" issued monthly by the Department of Industries and Labour. The marketing of grain, live stock, poultry, eggs and dairy products and estimated cash income received therefrom are the principal items covered.

A second major undertaking during the year was compiling monthly statistics on live stock slaughter in uninspected plants. The primary data needed are taken from monthly reports required from butchers licensed under The Live Stock Inspection Act.

The section on agriculture which forms a part of "Facts and Figures", published by the Department of Industries and Labour, was rewritten during the year.

The Crop Year

The 1954 crop season will long be remembered. The spring was late and frequent rains delayed seeding. The following statistics, showing the estimated area seeded to principal crops and summerfallowed as a percentage of 1953 figures (preceded by intentions at April 30th), indicate that farmers were unable to follow through their original production plans: wheat, (94) 92; oats, (113) 100; barley, (96) 88; flaxseed, (160) 131; and summerfallow, (106) 117 per cent. Thus the area seeded to all grains was lower than intended and summerfallow was increased.

The summer was cloudy and cold and, as the season advanced, moisture conditions became cumulatively excessive in most districts. Hail losses were above normal though much below losses for 1953. The cultivation of summerfallows was frequently impossible while haying weather was practically non-existent until late in the season.

Nevertheless, crops generally made good growth and would have yielded well had they matured. The weather in August and September was not conducive to ripening, rust took a considerable toll in eastern areas, and extensive damage resulted when frosts occurred on the nights of September 16th and 19th.

Some good-quality grain was produced east and south of Lethbridge and in parts of the Peace River country. However, it is estimated that 50 per cent of the total wheat crop will grade below No. 4 Northern. The bulk of the oats and barley threshed are grades 2 and 3 feed, while a considerable amount of oats was not sufficiently mature to warrant threshing.

The 1954 season was favorable for the production of grass seed but unfavorable for legume seed production. A record crop of creeping red fescue was harvested. The stands of alfalfa and sweet clover maintained for seed were sharply reduced, and the redundant growth resulted in a relatively poor seed set in the case

of all legumes. A preliminary estimate of the value of all forage crop seed produced indicates a reduction from \$4,698,000 in 1953 to \$3,828,000 in 1954.

ACREAGE AND PRODUCTION OF FORAGE CROP SEEDS 1953 AND 1954

Kind of Crop	Acreage		Production of Clean Seed	
	1953	1954	1953	1954
Alfalfa	75,000	18,500	6,700,000	1,815,000
Red Clover	10,000	40,000	2,600,000	1,635,000
Alsike Clover	20,000	60,000	9,000,000	7,000,000
Sweet Clover	20,000	30,000	5,250,000	5,825,000
Timothy	1,000	2,000	235,000	300,000
Bromegrass	50,000	60,000	6,000,000	4,775,000
Crested Wheat			235,000	220,000
Red Fescue			5,500,000	9,100,000
Meadow Fescue				8,000
Slender Wheat Grass			19,000	20,000

Rapid expansion continues in the production of vegetables for processing, i.e., for canning and freezing. The estimated farm cash income from the sale of vegetables, exclusive of potatoes and sugar beets was \$3,159,000 in 1954 compared to \$2,439,000 in 1953. For the third time in the last five years about 37,000 acres were devoted to sugar beets.

The estimated area, production and value of principal crops grown in 1953 and 1954 are shown in Table I.

Live Stock

For the second consecutive year the populations of cattle, sheep and swine on farms increased in the year ending June 1st. Cattle numbers reached an all-time peak of 2,010,000 head. Previous highs were 1,910,000 in 1953; 1,860,000 in 1945; and 1,854,000 in 1921.

The number of sheep increased 22 per cent to 528,000 head at June 1st, 1954. The record number was 1,023,200 head attained in 1944.

Swine numbers have steadily increased from 833,900 at June 1st, 1948 to 1,408,000 in 1954. The population was 2,337,700 head in 1943.

Detailed statistics on numbers and value of live stock and poultry on farms at June 1st, 1953 and 1954 are as follows:

Kind	Number		Value per Head		Total Farm Values	
	1953	1954	1953	1954	1953	1954
			\$	\$	thousand dollars	
Milk Cows	289,000	303,000	190	156	54,910	47,268
Calves	530,000	555,000	62	50	32,860	27,750
Other Cattle	1,091,000	1,152,000	146	121	159,012	139,115
Total Cattle	1,910,000	2,010,000	129	107	246,782	214,133
Hogs	1,180,000	1,408,000	31	36	36,636	50,976
Sheep and Lambs	432,000	528,000	19	17	8,368	9,113
Horses	222,000	197,000	51	50	11,240	9,850
Total Livestock					303,026	284,072
Hens & Chickens	8,280,000	9,350,000	0.88	0.86	7,323	8,035
Turkeys	530,000	650,000	2.29	2.30	1,215	1,561
Geese	78,000	70,000	2.27	2.20	177	154
Ducks	91,000	110,000	1.14	1.15	104	126
Total Poultry	8,979,000	10,180,000			8,819	9,876

The production and value of meat animals, including net sales, farm slaughter and inventory change for 1952, 1953 and 1954 are estimated as follows:

	Number			Value		
	1952	1953	1954	1952	1953	1954
				— Thousand Dollars —		
Cattle:						
Net marketings	310,560	395,000	466,458	61,115	61,083	66,124
Slaughtered on farms	11,700	15,000	19,700	1,812	1,812	2,210
Change in Inventory	153,000	81,000	72,000	23,491	9,837	8,375
TOTAL CATTLE	475,260	491,000	558,158	86,418	72,732	76,719
Calves:						
Net marketings	93,612	135,949	155,226	7,383	8,448	8,376
Slaughtered on farms	7,400	9,500	12,700	493	502	600
Change in Inventory	66,000	32,000	23,000	4,752	1,760	1,173
TOTAL CALVES	167,012	177,449	190,926	12,628	10,710	10,149
Sheep and Lambs:						
Net marketings	131,365	112,249	115,776	2,190	1,655	1,613
Slaughtered on farms	5,000	5,500	8,200	99	97	136
Change in Inventory	31,000	47,000	14,000	589	874	237
TOTAL SHEEP & LAMBS	167,365	164,749	137,976	2,878	2,626	1,986
Swine:						
Net marketings	1,566,678	1,642,501	1,689,079	60,051	70,743	75,570
Slaughtered on farms	61,000	58,000	56,000	2,234	2,422	2,449
Change in Inventory	185,000	—31,000	301,000	4,935	—2,678	9,804
TOTAL SWINE	1,812,678	1,669,501	2,046,079	67,220	70,487	87,823
TOTAL LIVE STOCK				169,144	156,555	176,677

Live Stock Products

The production and value of live stock products are shown in Table 2. As compared to 1953 the output of dairy and poultry products and wool increased, while fur farming decreased. Bee-keeping also expanded but poor weather reduced production per colony. Prices received for most commodities were somewhat lower than in the preceding year.

SUMMARY OF THE VALUE OF AGRICULTURAL PRODUCTION, 1951-1954

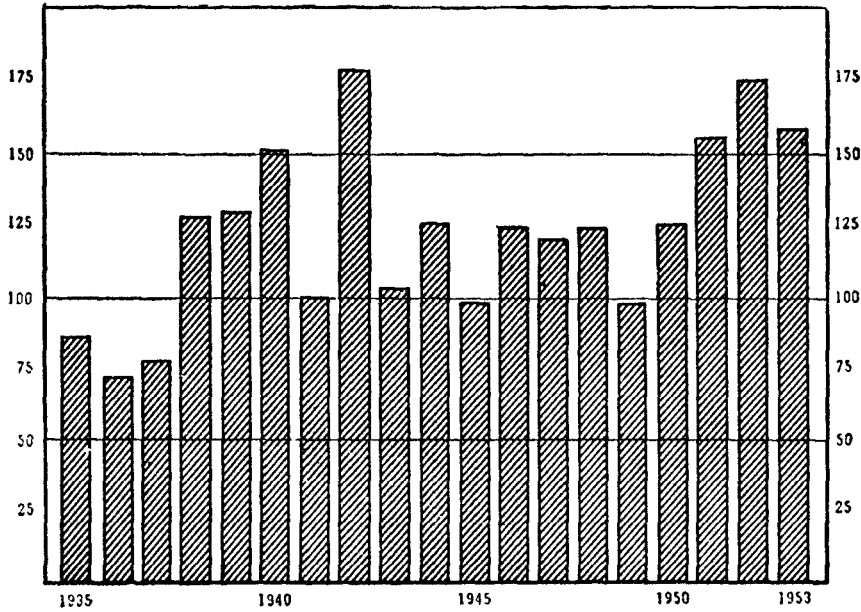
	1951	1952	1953	1954
		— thousands of dollars —		
Field Crops	503,067	534,323	432,051	305,024
Live Stock	178,674	169,930	156,555	176,677
Dairy Products	47,308	35,984	37,910	38,629
Poultry Products	28,525	25,141	29,047	29,903
Honey and Wax	569	618	563	411
Wool	1,080	725	754	775
Fur Farming	2,826	2,836	2,651	2,481

Cash Income from Farming Operations

The graph showing index numbers of physical volume of agricultural production indicates considerable variation in production from year to year. The production of grain, particularly wheat, for cash sale, which in turn is heavily dependent upon weather, is still the dominant farm enterprise. However, the production of coarse grains for sale is increasing.

As compared to the period 1935-39 the cattle industry has made important gains relative to other enterprises. Cash income from the sale of hogs (though high during the war) has just about maintained its relative pre-war importance; poultry production has gained a little, while dairying as a source of income has declined relative to total cash income from farming operations. Details are shown in the graphs on page 99.

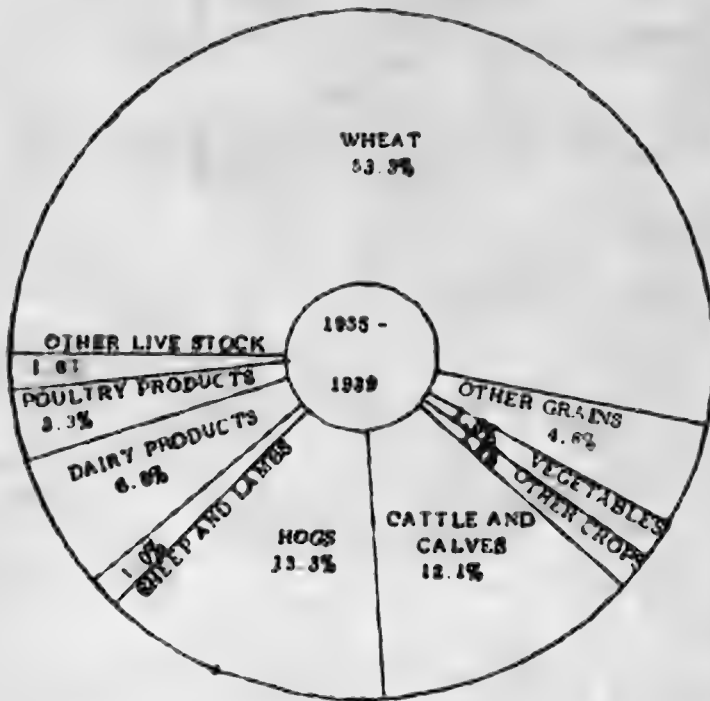
INDEX NUMBERS OF THE PHYSICAL VOLUME OF AGRICULTURAL
PRODUCTION, ALBERTA, 1935 - 1953
1935-39 = 100



Gross and Net Farm Income

Farm incomes, including inventory changes, reached peaks in 1951. In spite of good crops, lower live stock values and higher expenses of production in 1952 and 1953 resulted in a reduction in net farm income. In 1954, live stock receipts were large and prices well maintained but gross income from grains (including inventory change) will be the lowest for a decade. As a result gross and net farm incomes declined in 1954.

**SOURCE OF CASH INCOME FROM FARMING OPERATIONS
IN ALBERTA 1935-39 and 1949-53**



DEPARTMENT OF AGRICULTURE

TABLE I
ESTIMATED PRODUCTION AND VALUE OF FIELD CROPS, ALBERTA 1953 AND 1954*

	Area		Yield Per Acre		Production		Price Per Unit		Total Value	
	1953	1954	1953	1954	1953	1954	1953	1954	1953	1954
	Acres	Acres	bu.	bu.	bu.	bu.	\$	\$	\$	\$
Grain and Seed Crops										
Wheat	6,340,000	5,862,000	25.7	16.2	163,000,000	95,000,000	1.30	1.38†	211,900,000	131,100,000
Oats	2,357,000	2,354,000	47.5	31.4	112,000,000	74,000,000	0.55	0.65†	61,600,000	48,100,000
Barley	3,489,000	3,053,000	31.0	22.9	108,000,000	70,000,000	0.83	0.92†	89,640,000	67,900,000
Rye	460,000	215,300	21.1	18.6	9,700,000	4,000,000	0.76	0.95	7,372,000	3,800,000
Mixed Grains	80,600	120,000	35.0	25.7	2,821,000	3,084,000	0.70	0.65	1,975,000	2,005,000
Flax Seed	164,000	215,000	12.2	10.0	2,000,000	2,150,000	2.37	2.41	4,740,000	5,182,000
Forage Crop Seed									4,698,000	3,828,000
Total Grain and Seed Crop	12,890,600	11,819,300							381,925,000	261,915,000
Vegetable Crops										
Potatoes	15,400	15,400	179.0	123.4	2,757,000	1,900,000	1.28	1.50	3,529,000	2,850,000
Sugar Beets	34,700	36,990	12.17	11.90	422,281	440,000	14.23	13.65	6,009,000	6,042,000
Other Vegetables (produced for sale)									2,439,000	3,159,000
Total Vegetables	50,100	52,390							11,977,000	12,051,000
Tame Hay	1,300,000	1,343,000	2.00	1.49	2,600,000	2,000,000	12.50	12.00	32,500,000	27,000,000
Miscellaneous Crops (produced for sale)									5,649,000	4,058,000
Total Acreage and Value of Field Crops	14,240,700	13,214,690							432,051,000	305,024,000

*Preliminary.
†Prices estimated on the basis of Canadian Wheat Board average weekly asking prices August 1, 1954 to March 31, 1955.

TABLE 2
ESTIMATED PRODUCTION AND VALUE OF PRINCIPAL LIVE STOCK PRODUCTS
1953 AND 1954

Products	Production		Price per Unit		Total Value	
	1953 10.	1954 lb.	1953 \$	1954 \$	1953 \$	1954 \$
Dairy Products:						
Butterfat for creamery butter	24,607,000	24,902,000	0.60	0.60	14,812,000	14,813,000
Dairy Butter produced	3,043,000	2,943,000	0.56	0.56	1,704,000	1,648,000
	cwt.	cwt.				
Milk and Fat for Ice Cream*	417,010	422,280	2.41	2.36	1,006,000	998,000
Milk for Cheese and Concentrating	676,650	623,170	2.46	2.42	1,665,000	1,510,000
Milk and Cream for fluid sales*	2,579,080	2,712,060	4.29	4.28	11,077,000	11,603,000
Milk consumed on farms	1,312,190	1,324,000	2.40	2.40	3,149,000	3,178,000
Milk fed to farm animals	962,720	1,029,700	2.40	2.40	2,311,000	2,471,000
Skim Milk, etc, fed on farms	6,829,680	6,880,730	0.32	0.35	2,186,000	2,408,000
Total Value of Dairy Products					37,910,000	38,629,000
Poultry Products:	doz.	doz.				
Commercial eggs	36,274,000	41,283,000	0.39	0.33	14,138,000	13,664,000
Hatching eggs	963,000	1,120,000	0.61	0.58	589,000	647,000
	lb.	lb.				
Poultry meat	40,636,000	49,960,000	0.35	0.33	14,320,000	15,592,000
Total Value Poultry Products					29,047,000	29,903,000
Honey	3,856,000	2,636,000	0.14	0.15	†563,000	†411,000
Wool	1,985,000	2,214,000	0.38	0.35	754,000	775,000
	No. Pelts and	Animals Exported				
Fur Farming†	161,176	136,845			2,651,000	2,481,000
Total Value of Live Stock Products					70,925,000	72,199,000

*Total milk equivalent.

†Includes the value of wax.

‡Year ending August 31st.

TABLE 3
FARM CASH INCOME FROM THE SALE OF FARM PRODUCTS*

	1952		1953		1954	
	'000 \$	% of Total	'000 \$	% of Total	'000 \$	% of Total
Field Crops	318,741	63.1	283,795	58.3	174,447	45.2
Live Stock	130,739	25.9	141,929	29.2	151,693	39.3
Dairy Products	26,582	5.3	28,612	5.9	29,062	7.6
Poultry Products ...	17,833	3.5	21,349	4.4	21,033	5.5
Honey and Wax	584	0.1	543	0.1	406	0.1
Wool	724	0.1	732	0.2	753	0.2
Fur Farming	2,211	0.5	2,131	0.4	2,404	0.6
Miscellaneous	7,656	1.5	7,384	1.5	5,896	1.5
Total	505,070	100.0	486,475	100.0	385,694	100.0

*Interim and final payments made by the Canadian Wheat Board on participation certificates (wheat, oats and barley) are included in the calendar year in which payments are received by farmers.

TABLE 4
FARM OPERATING EXPENSES AND DEPRECIATION CHARGES

	1952 \$ '000	1953 \$ '000	1954 \$ '000
Taxes	17,404	18,708	20,400
Gross rent	40,255	32,520	19,876
Wages paid to labour	36,502	33,685	27,739
Interest on indebtedness	7,378	7,942	7,851
Feed and Seed purchased	18,573	15,498	16,054
Tractor expenses	28,298	29,209	31,108
Truck expenses	12,093	13,429	14,834
Automobile expenses for farm business	9,771	10,465	11,040
Engine and combine expenses	4,135	4,170	4,040
Machinery repairs and shop charges	14,191	14,326	14,390
Fertilizer	2,991	3,612	3,000
Fruit and Vegetable supplies	3,492	3,312	3,328
Repairs to buildings	7,893	8,296	8,478
Miscellaneous	12,313	11,657	10,801
Total operating expenses	216,099	206,829	192,939
Depreciation, buildings and machinery	41,612	46,734	49,156
Total operating expenses and depreciation	257,711	253,563	242,095

TABLE 5
NET INCOME* OF FARM OPERATORS FROM FARMING OPERATIONS

	1952	1953	1954
	\$ '000	\$ '000	\$ '000
Cash Income from the sale of Farm Products	505,070	486,475	385,694
Income in Kind	46,729	48,158	46,769
Value of Changes in Inventory	63,412	19,144	—14,362
Gross Income	615,211	553,777	418,101
Operating Expenses and Depreciation	257,711	253,563	242,095
Net Income from Farming Operations	357,500	300,214	176,006
Supplementary Payments (P.F.A.A.)	2,349	559	1,031
Net Farm Income	359,849	300,773	177,037

*Includes estimated rental value of farm homes.

ACKNOWLEDGMENT: The Alberta Department of Agriculture co-operates with the Agricultural Division of the Dominion Bureau of Statistics, which is the principal agency gathering agricultural statistics in Canada. Most of the statistics contained in this publication are based on material published or provided by the Bureau

DISTRICT AGRICULTURIST DIVISION

Personnel

There has been no change in the number of offices maintained as compared with last year. The 42 offices, with personnel as of the year end, are listed below:

Athabasca	G. L. Godel	Myrnam	Fred Magera
Berwyn	A. W. Beattie	(Assistant)	R. Fodchuk
(Assistant)	P. M. Holt	Olds	Hugh McPhail
Bonnyville	L. Gareau	(Assistant)	H. J. Fulcher
Brooks	Ira Lapp	Ponoka	J. L. Kerns
Calgary	N. F. Bell	Red Deer	J. L. Eaglesham
Camrose	L. D. Williams	(Assistant)	E. W. Walker
Cardston	D. L. Steed	Rocky Mtn. House	G. A. Ross
Clareholm	H. H. Michael	Ryley	N. A. Chomik
Coronation	J. D. Jantzie	Sangudo	W. L. McNary
Drumheller	S. W. Pettlem	Sedgewick	A. E. Edwards
Edmonton North	J. M. Fontaine	Smoky Lake	Fred Strashok
Edmonton South	B. J. Whitbread	Spirit River	G. W. Shewchuk
(Assistant)	E. H. Horton	Stettler	R. D. Price
Evansburg	A. A. Campbell	Strathmore	K. H. Walker
Falher	V. Surprenant	St. Paul	Marcel Chevette
Grande Prairie	R. C. Moffat	Taber	M. A. Simmons
Hanna	A. E. Sherman	Vegreville	W. N. Pidruchney
High River	C. E. Yauch	Vermilion	E. H. Buckingham
Lac La Biche	J. S. Lore	(Assistant)	R. C. Bocking
Lacombe	L. W. Rasmussen	Wainwright	J. S. Duncan
Leduc	J. R. Gylander	Westlock	W. A. Ross
Lethbridge	P. Jamieson	Wetaskiwin	W. C. Proctor
Medicine Hat	J. L. Anderson	Willingdon	Fred Magera
		(Assistant)	R. Fodchuk

Appointments During 1954

R. C. Bocking—Assistant at Athabasca and Vermilion
P. M. Holt—Assistant at Berwyn
R. Fodchuk—Assistant at Myrnam and Willingdon
E. W. Walker—Assistant at Red Deer
E. H. Horton—Assistant at Edmonton
A. E. Sherman—District Agriculturist at Hanna

Transfers

L. D. Williams from District Agriculturist at Sedgewick to District Agriculturist at Camrose.

H. J. Fulcher from Assistant at Edmonton to Assistant at Olds.

R. C. Moffat from Assistant at Vermilion to District Agriculturist at Grande Prairie.

A. E. Edwards from Assistant at Lethbridge to District Agriculturist at Sedgewick.

W. L. McNary from Assistant at Lacombe to District Agriculturist at Sangudo.

V. Surprenant from Assistant at Athabasca and Edmonton to District Agriculturist at Falher.

Resignations

W. A. Moisey—District Agriculturist at Camrose—to enter private business.

J. T. Stranatka—District Agriculturist at Grande Prairie—to enter Dominion Government Service.

L. H. Peacock—District Agriculturist at Sangudo—to return to teaching high school.

Farm Management

Emphasis is being placed by District Agriculturists on a balanced farm plan for a more successful and prosperous farm family life, and the response has been encouraging. District Agriculturists working with the farmers concerned have in operation 106 complete farm plans. They have worked with another 241 farmers respecting partial farm plans covering at least field arrangement and crop sequence. They have assisted 14 farmers to set up complete farm accounts. In response to an increasing number of requests, 94 farm leases, livestock share agreements or father-son agreements have been drawn up. Farm management was discussed as a principal topic at 167 meetings, and as incidental to other topics at 317 meetings. Information and advice on farm management were provided to an additional 3,910 persons through correspondence or interviews.

Soil Conservation

A number of projects and programs have been introduced to aid farmers in conserving and improving their soil. Two hundred and twelve farmers participated in special projects such as Save the Soil Competitions, Better Farming Programs and Grassing Down Waterways. Demonstrations to illustrate the value of soil conservation practices were laid down on 107 farms and the results were seen by 3,352 farmers. Soil conservation meetings were arranged on 146 occasions and these were attended by 6,794 persons. In addition, 3,742 other persons were given assistance.

Weed Control

Weed control received a serious setback in the Province because of the extreme wet weather during the growing season. An increased number of requests came to the District Agriculturists for assistance in dealing with the weed problems. The effectiveness of this service was increased very materially through the co-operation of Agricultural Service Boards. Efforts were made to maintain a balance between cultural and chemical methods of control. The use of clean seed and forage crops was emphasized. Eighteen community seed cleaning plants and 51 farm plants were given assistance in establishment or operation. A total of 1,394 seed drill samples were graded to illustrate the quality of seed sown on Alberta farms. Demonstration fields and plots were laid down and demonstrations arranged on 165 farms where the results were observed by 2,412 persons. Weed control meetings and field days were held at 246 centres throughout the Province with an attend-

ance of 8,811 persons. An additional 5,354 farmers were given assistance with weed control.

Crop Improvement (Grain)

To help demonstrate the value of new varieties, 582 field demonstration plots or field days were held. These were viewed and attended by 3,180 farmers. All offices are in a position to advise farmers where they can locate registered and commercial quality seed of the right variety. These offices assisted in distributing 49,633 bushels of registered and 190,915 bushels of commercial quality seed. They were able to give further assistance, through correspondence and interviews, to 3,371 farmers with respect to cereal crop improvement.

Crop Improvement (Forage)

With the difficulty of marketing wheat and other cereals and the many other hazards involved, many farmers are turning to forage crops as a more permanent part of their production program. Under the Department's forage seed production program, 292 farmers participated in seeding forage seed production plots. Variety and other types of forage demonstration plots were seeded down on 98 farms. Twenty-nine field days were arranged to discuss the results to an audience of 2,510 persons. A pasture improvement project, designed to demonstrate the value of improved cultivated pastures, succeeded in having 227 farmers participate. Another 61 farmers seeded forage crops as a part of a balanced farm project. Increasing interest in more efficient methods of harvesting forage crops, including silage production, was responsible for 1,475 farmers participating in forage harvesting and storage demonstrations and field days. Through correspondence and office interviews, an additional 6,074 persons were given help and information with respect to this subject.

Field Crop Pests and Diseases

In order to combat the many field crop pests and diseases, the combined efforts of all research and experimental institutions co-operating with local and civic authorities is very essential. The District Agriculturists succeeded in bringing these bodies together to attain a degree of control sufficient to prevent serious losses. One hundred and forty demonstrations were conducted with an attendance of 4,328 persons. Three hundred and forty-five specimens were forwarded to various institutions for identification and 2,804 persons were given some form of assistance.

Livestock Improvement

District Agriculturists report a marked improvement in the quality of beef cattle throughout most of the districts. The reverse is true in the case of swine quality. Efforts were directed towards organizing schools and demonstrations designed to improve the quality of all classes of livestock and above all to help increase net returns. Such programs as pure-bred sire areas, Bang's and T.B. control, swine quality improvement demonstrations, and field days and demonstrations showing improved livestock husbandry practices, were used in varying degrees to achieve this objective. Sixty-one demonstrations involving judging and selection were organized and were attended by 3,141 persons. Meetings at which livestock

was the principal topic were arranged at 212 centres and these were attended by 12,566 persons.

NO. OF HERDS OR FLOCKS ASSISTED WITH SELECTION OR CULLING

	No. of herds or flocks	No. of animals or birds
Beef	143	2,714
Sheep	37	804
Swine	159	1,499
Poultry	43	4,930

Assistance was given in organizing and conducting 51 livestock animals, in providing dehorners to dehorn 10,495 head of cattle, and in giving instruction or advice to 6,921 persons through correspondence or interviews.

LIVESTOCK PLACEMENTS THROUGH OFFICES

	Male	Female
Horses	9	20
Cattle	830	1,339
Sheep	210	1,072
Swine	705	840
Poultry	152	1,260

Assistance was given in organizing and conducting 51 livestock sales where 10,543 head of livestock were sold at an estimated saving of \$92,340.00 to the farmers. Persons otherwise assisted with some kind of livestock improvement numbered 1,241.

Livestock Pests and Diseases

Interest continues to be high in controlling the many kinds of livestock pests and diseases affecting all classes of livestock. Veterinary and Experimental Institutions, Universities and Science Services have co-operated with the Extension Service in helping the farmers fight losses resulting from these pests and diseases. Farmers numbering 25,441 participated in Bang's Control programs to have 126,366 calves vaccinated. Many areas in the Province are declared "T.B." or "Bang's Free Areas" with all the livestock producers co-operating. In order to combat the heavy losses from coyotes, 6,161 farmers participated to kill an estimated 27,836 coyotes in the farming areas of the Province. Twenty-nine District Agriculturists report an estimated saving of \$198,200.00 in livestock losses attributed to the destruction of coyotes. They arranged 417 demonstrations on livestock pests and diseases, which were attended by 3,712 farmers. They forwarded 443 specimens to Veterinary Laboratories, Science Service and Universities for identification. District Agriculturists otherwise assisted 3,639 persons with problems of this nature.

Dairying

A number of District Agriculturists report increased interest in dairying to assist farmers in a more permanent and more secure type of production than straight grain farming. In order to help improve dairy cattle and increase production and efficiency, they have arranged and conducted 61 demonstrations dealing with these matters. Demonstrations were attended by 2,801 persons. Cow testing as a means of increasing efficiency and production has been introduced or influenced on 114 farms. Sixty-seven special dairy meetings were held and attended by 2,910 farmers. Through the influence of our offices, 74 dairy herds were assisted in culling and in selection of better quality animals. A total of 1,257 farmers

were given assistance with their dairy problems through correspondence and interviews.

4-H Clubs

District Agriculturists again report a slight increase in the number of 4-H Clubs in their districts. Three hundred and forty-eight clubs were supervised in 1954 with a total membership of 6,737 as compared with 329 clubs in 1953. Efforts were made to train club leaders and adult advisory committees to take over more of the responsibility of supervising 4-H Clubs. District Agriculturists continue to spend a large portion of their time on 4-H Club matters. A total of 461 demonstrations to members and parents were conducted and these were attended by 17,753 persons. They arranged 1,532 meetings with a total attendance of 41,732 and trained 53 judging teams to take part in competitions.

Youth Training

Efforts towards helping young people in the community were directed through 84 short courses, farm camps or tours. These various activities were patronized by 16,725 farm young people.

Agricultural Service Boards

The District Agriculturist, as a member and technical advisor finds these Boards effective in helping to accomplish Extension work. Active participation of the Service Boards has enabled them to promote agricultural improvement programs such as the following:

- Save the Soil Campaigns
- Better Farming Competitions
- Bang's and T.B. Control Campaign
- Coyote Control Campaign
- Short Courses and Field Days
- Weed Control

Thirty-seven Service Boards operating throughout the Province held 248 regular board meetings which were attended by the District Agriculturists. With the assistance of the Boards, a number of field days, tours and other agricultural events were organized. These have been listed under other headings. Service Boards have 95 farms under supervision because of mismanagement or neglect.

Horticulture and Farmsteads

The farmstead is always the most important centre of any well planned farm. To help farm families in this respect 344 farmsteads have been planned. They have helped in planning 627 farm shelterbelts, including farmstead plantings. To demonstrate more effective planting, 60 tree planting demonstrations were conducted with most of these involving the use of tree planting machines. The various offices through correspondence and interviews have assisted a total of 3,175 persons with horticultural matters.

Beekeeping

Bee keepers were assisted in ordering packaged bees and supplies, and in obtaining the services of the Apiculture Branch

when required. Four specialized beekeepers' meetings were arranged and these were attended by 325 persons. An additional 243 persons were given assistance in various ways.

Agricultural Societies

In addition to the fairs which have been the main function of some of the Agricultural Societies, the new Farm and Home Improvement Program is giving promise of providing an active medium for promoting the agricultural good of the community. District Agriculturists have judged or otherwise assisted at all fairs in their communities. They co-operated with the Societies in 17 Farm and Home Improvement Programs, with 232 farmers participating. These groups took part in 25 tours or field days, attended by 1,362 persons. Eight hundred and eleven persons were given some form of assistance through correspondence and interviews.

Agricultural Engineering

Many calls come to the District Agriculturist Office for help in this subject and specialists must be called at times to give the necessary technical advice. Sixty-one agricultural engineering short courses and meetings were arranged and 49 field days and demonstrations were seriously curtailed because of the extremely wet weather and late spring. A total of 6,420 persons participated in the meetings, demonstrations and field days dealing with this subject. Requests for assistance from 1,076 persons were dealt with.

Agricultural Short Courses

Throughout the year many special meetings and general short courses were arranged with the co-operation of local organizations such as Chambers of Commerce, Agricultural Societies, Agricultural Service Boards, Service Clubs and Farmer Organizations. Short courses and meetings not reported under other headings were arranged at 311 centres. District Agriculturists addressed 335 other meetings. These gatherings were attended by 29,568 persons.

Farm Labour

District Agriculturist Offices continue to co-operate in providing farm help and farm labour placements. Services provided under this heading are as follows:

Immigrant farm workers visited	196
Harvesters placed or recruited	1,669
General farm help placed	1,522
Surplus farm labour directed to other industries	342

Newspaper Articles

An increased use of the press and radio was achieved this past year. Excellent co-operation has been given by the press and radio stations in providing the public with useful and timely agricultural information.

Newspaper articles or columns prepared	1,955
Radio talks and interviews	130

Master Farm Family

District Agriculturists take an active part in this program by receiving nominations for master farm families, conducting the judging with the district committee, giving publicity to the program

and assisting in organizing community recognition when awards are made.

Dams and Dugouts (Peace River District Only)

The four offices in this area assist farmers with their difficult water supply by locating sites for dugouts, locating suitable contractors to do the work and inspecting the completed dugouts so they may qualify for the subsidy provided. They inspected and otherwise gave assistance in the construction of 95 dugouts.

Miscellaneous



Many other services are provided by District Agriculturists which are too numerous to mention in detail. These include organizing, conducting or participating in:

- Rural Electrification Schools
- Sheep Shearing Schools
- Rabies Control Campaigns
- Irrigation District Advisory Committees
- Technical Assistance with Farm Drainage and Contour Farming
- Irrigation Field Days for New Irrigators
- Soil and Water Analysis
- Special Information for Irrigation Farmers
- Peace River Co-ordinating Council
- Feed and Seed Supplies for Crop Failure Districts
- Assisting the Dominion Bureau of Statistics with Crop Surveys
- Seed Control Areas
- Speaking at Career Nights at High Schools
- Grain Storage Demonstrations
- Seed, Grain and Livestock Listing Service

SUMMARY OF DISTRICT AGRICULTURISTS' ACTIVITIES

	1954	1953
Number of meetings	3,777	3,332
Attendance at meetings	222,310	184,322
Farm visits	22,947	24,936
Office interviews	58,407	55,023
Telephone calls	50,027	51,745
Letters written	45,695	45,682
Bulletins distributed	114,910	104,797

IRRIGATION DIVISION

The land development and Extension Services provided for irrigated areas by this Branch have again been expanded to meet the increased rate of land settlement. More experienced and better qualified personnel along with improved techniques have resulted in a larger volume and a better quality of work accomplished. Favorable weather permitted the continuation of survey and field work until Christmas.

The land levelling program was accelerated in 1954 to meet with the increased need and demand for it. Private operators entered the program in the spring, doing levelling on privately owned lands, and also for the colonization manager. The Alberta Department of Agriculture heavy land levelling equipment operated continuously throughout the season, working on colonization lands and some privately owned lands. An additional unit was also rented to operate with the three department units to accelerate the

work according to requirement. All the lands estimated to be levelled in 1954 were not completed, even though the work continued through to a week before Christmas. The allotment per parcel for levelling colonization lands was increased during the season which enabled us to do a better job and provide a more reasonable standard of irrigation on the lands.

The efficiency of operation of the units and of the nature of levelling done was improved in 1954. The top soil was replaced on all cut areas as a result of finding a simple and inexpensive method of handling it. Farmers were satisfied with our procedures, methods and personal contacts. Some farmers paid as much as \$43.00 per acre for land levelling.

The survey, map and report work was very much in demand from early spring throughout the irrigating season. Extra survey staff was employed to accelerate the work, and although some surveys were late, nearly all the demand was satisfied. Aerial photography used for mapping and classification purposes helped to speed up the survey service and to give each farmer slightly more detail in surveys, maps and reports.

The detailed classifications are far behind the surveys. The appointment of additional technical staff will be necessary. The classification can be accomplished best after the farmers have irrigated their land for a year or more.

Demonstration irrigation field days were organized by the District Agriculturists and assisted by this service. A three-day refresher course for Extension workers was arranged on P.F.R.A. and experimental station land at Vauxhall, where water and equipment was put to use and evaluated. This co-ordinated a uniform procedure for approximately twelve to fifteen farm demonstration field days held during May and June and in October. Follow-up farm visits were made to assist farmers in their irrigation practices, but were limited because of the required attention to land levelling and survey duties.

The construction of distribution works from the low line canal of the St. Mary and Milk Rivers Development will be completed in 1955. Classification of all these lands should also be completed next year according to present plans. This service will be extended into the Retlaw-Lomond tract of the Bow River Project and into the Taber Irrigation District in 1955 to do survey and classification work.

The following is an itemized account of services rendered, and of the administration of the service.

STAFF		
	Number Employed	Man-Days Worked
Extension Irrigationist	C. J. McAndrews	287
Assistant Extension Irrigationist	D. G. Harrington	80
Survey Supervisor	S. Noreika	280
Land Levelling Supervisor	J. L. Young	165
Stenographer	P. Boyda	140
Draftsmen	(three)	200
Instrument Men	(six to ten) Winter drafting	280
	Field work	1,650
Rodmen	(eight to fifteen)	2,450
Staff on Land Levelling employed by S.M.R.D. (four to six)		600
TOTAL		6,132

Number of jobs done by Alberta Department of Agriculture heavy land levelling equipment or by privately owned equipment supervised by our staff:

—Colonization lands	47	
—Privately owned lands	24	
—Jobs that were not land levelling (dugouts, tree belts, construction)	9	
—Acres improved by levelling	2,730	
—Acres improved by grading ditches	1,300	
TOTAL JOBS		80
TOTAL Acres Improved (Approximate)		4,030

The above does not include land levelling done by the farmers with their own equipment.

SURVEY SERVICE

Number of Surveys:		
re: farm ditches	755	
irrigable area	60,000 acres	
re: mapping for classification	109	
irrigable area	8,000 acres	
re: reclassification	10	
irrigable area	800 acres	
re: land levelling	115	
irrigable area	8,000 acres	
re: pump irrigation	2	
irrigable area	150 acres	
re: miscellaneous	13	
TOTAL Number		1,004
TOTAL Area		76,950 acres
Number of quarter sections of land aerial photographed for classification		558
Number of quarter sections marked by plow furrows showing surveys by use of Department tractor		182
Number of quarter sections marked by farmers (approximate)		650

INSPECTIONS

Number of Inspections.		
re: Colonization	49	
re: Classification	139	
re: Land Levelling	170	
re: Pump Irrigation	18	
re: Miscellaneous (farm planning, irrigation practices, etc.)	56	
TOTAL		432

DRAFTING

No. of Maps:		
—plotted as original plats	177	
—prepared as tracings	273	
—prepared as pencil copies	820	
—prepared as miscellaneous	41	
—plans other than maps	28	
TOTAL Prepared		1,339
—printed reproductions of maps prepared		2,872

REPORTS

Number of Reports Prepared.		
re: Employees and administration	21	
re: Soils—mimeographed set	1,000	
—others	2	
re: Classification	232	
re: Reclassification	22	
re: Temporary classification	31	
re: Pump irrigation	13	
re: Land levelling estimates	85	
re: Land leveling (general)	27	
re: Miscellaneous (colonization, irrigation practices, etc.)	17	
TOTAL		1,450

ISSUED

Number of Maps, Plans, Reports issued.		
re: Maps to colonization manager	319	
re: Maps to land owners	280	
re: Maps to V.L.A.	108	
re: Maps and plans to District Agriculturists and others	600	
TOTAL Maps and Plans issued		1,344
re: Reports to colonization manager	368	
re: Reports to land owners	308	
re: Reports to V.L.A.	97	
re: Reports to Headquarters	24	
re: Miscellaneous	37	
TOTAL Reports Issued		834
Number of talks given	31	
Number of circulars issued with maps	1,941	
Number of other circulars and publications including irrigation newsletter prepared and mimeographed for District Agriculturists	4,030	
TOTAL of all Issued		7,180

MISCELLANEOUS

Number of Demonstrations, Tours and Field Days (participated in)	16	
Number of meetings attended and participated in	55	
Attendance at meetings		2,508
Number of farm visits	151	
Number of office interviews	505	
Number of phone calls	767	
Number of letters written	619	

"Sprinkler Irrigation" is included with pump irrigation data.

"Lister Shovels" used on approximately 30 farms after land levelling to control the danger of wind erosion.

"Special Studies": The committee re 'Land Levelling Compared to Sprinkler Irrigation' was active and has made a progress report, and should have a final report by the end of 1955, although all the research results will not be known.

"Fertility Studies" on land levelling lands by the Lethbridge Experimental Station received co-operation from this service.

"Soil Samples" were taken for farmers' information and for land leveling fertility information. Number of samples—47.

"Soil Studies" were made of our soils in general and with 'Special Problem Soils' by inspection and interview with Alberta Soil Survey and P.F.R.A. Drainage Division.

WOMEN'S DIVISION**FOODS AND NUTRITION****Cooking Schools**

During 1954 an effort was made to help the Home Economists carry out more food demonstrations. The preparation of meals in a demonstration offers opportunity to bring in information on nutrition and meal planning as well as on the techniques of food preparation. It is not possible, because of the time and cost involved, to provide the glamour which gives attraction to commercial "Cooking Schools". While commercial demonstrators plan to spend about four hours of preparation time for every hour of demonstration, the Extension worker often has to do her preparation while the audience is gathering. The Extension worker gives most of her demonstrations in home or community kitchens or in a hall or schoolroom with very limited facilities.

Thanks is due to utility companies and equipment dealers who have co-operated with us by setting up equipment (stoves and refrigerators) for cooking schools. The provision of such facilities makes it possible to give a much more finished demonstration. Three cooking schools, made possible by such co-operation, were conducted by the Extension Nutritionist in 1954. Two of these were two-day schools with three sessions at each. Attendance at these schools ranged from 50 to 91.

The Extension Nutritionist also conducted six cooking schools in homes and three in community halls with from 12 to 40 in

attendance. Following these, more demonstrations of this type were given by the District Home Economists.

School Lunch Program

"The School Lunch in Alberta", a bulletin suggesting methods for the organization and operation of a hot lunch program, was published in 1954. This bulletin, compiled by the Extension Nutritionist with the help of a committee representing the Departments of Education and Health, was published jointly by the Departments of Agriculture and Education.

Nutrition Study Groups

There is still an occasional request for nutrition study courses though no special effort has been made to organize study groups. Five groups requested the study course material and the Extension Nutritionist was called upon to help organize two of these groups.

Work With 4-H Clubs

Interest in 4-H food projects increases each year. Thirty-four Clubs, with a total membership of 421, completed food projects in 1954. Garden Club projects, which also include vegetable preparation and preservation, meal planning and the keeping of personal records of nutritional health and food habits, were completed by 72 Clubs with a total membership of 870.

Other Activities

A total of 39 lectures on food nutrition topics were given by the Extension Nutritionist with a total attendance of 1,919. These included 18 cooking schools, 3 short course programs, 6 meetings with food clubs, 2 demonstrations to Home and School Associations, and the remainder food and nutrition lectures to other adult groups.

Correspondence has included 68 requests for specific information, the greatest number being for information re. canning and other food preservation problems. Each year numerous requests are received for help with special dietary problems, particularly overweight. Other requests have included problems of home baking, menu planning, child feeding, food preparation and food purchasing; and requests for special information re. rose hips, herbs, edible weeds, home pasteurization of milk, quantity food preparation and recipes.

As the field staff increases more of the Extension Nutritionist's time is spent with the District Home Economists, and in preparing information on food and nutrition topics for them. This includes demonstration topic outlines and illustrative material.

Work on publications included the new School Lunch Bulletin and a new leaflet on outdoor cookery. A leaflet on variety meats to replace the old liver recipes leaflet is ready for publication in January. Considerable revision was also made in the Food Club Project Books.

Seventeen newspaper items were prepared for agricultural notes and further material was given verbally to the Secretary-Writer of the Radio and Information Branch. Material from these notes was used on both "Call of the Land" and the CBX Farm Program.

In answer to a request, a nutritive check was made of the food dietary used at the Bowden Institute and recommendations made for minimum allowances of certain foods.

Visits were made to each of the three Schools of Agriculture and a dietary study started with the students in these schools. Assistance was given to the food service supervisor at one of the schools and a report presented to the Principal and Superintendent re. problems of food service.

The Annual Meetings of the Canadian Extension Association, the Canadian Council of 4-H Clubs, the Alberta Home Economics Association and the Canadian Home Economics Association were attended by the Extension Nutritionist.

HOME DESIGNING

Remodelling

Although Home Designing Specialist services were available for only half of this year, assistance was given in remodelling 62 homes, 7 of these being completely remodelled, 21 kitchens modernized and 34 living areas improved through structural changes as well as refurnishing and decorating. The "Farm House Remodelling" bulletin was distributed to 300 people to assist them with their plans and problems in remodelling. Three newsletters sent to 1,200 persons dealt with Remodelling the Home, Kitchen Remodelling and Invest in Your Attic.

Kitchen Planning

The bulletin "Farm Kitchen and Utility Rooms" was issued to 480 prospective builders and remodellers. Twenty-three kitchens were remodelled and 34 kitchens planned for new homes. Plans and cabinet details were prepared in each case with perspective drawings to help envision the complete kitchen. Twenty blueprints of the Step-Saving U Kitchen were sold. Six lectures on kitchen planning and utility rooms were attended by 292 persons. One newsletter on kitchen planning was forwarded to 400.

Home Planning

There is a continued need for assistance in the building of new farm homes, 54 blueprints for house plans being sold. Seventeen other applicants were assisted with plans for their new homes. Three lectures on home planning were attended by 40 persons. The bulletin "Farm House Planning" was distributed to 840 people and 800 received two newsletters on the topics, "See Your House Before You Build" and "What is the Best Building Material for Your Home?".

Home Furnishings and Electrical Equipment

"Buying of New Decorating Materials" was the subject of 10 lectures attended by 764. Four newsletters distributed to 1,600 covered the topics, Your Furnace Needs Attention, Where Does Your Heating Dollar Go?, What's New in Heating, Building Your Own Furniture.

Interior Decoration

There is a constant demand for information in this field but time permitted only five lectures attended by 499 persons. Complete redecoration of 7 homes was supervised. Eight groups studied the Interior Decoration Home Study Course and three newsletters distributed to 1,200 dealt with Take Your Color Scheme

Along, Give Your Home a Splash of Color, and Christmas Decorations.

Other Activities

Other activities include a series of four lectures on Home Planning and Remodelling attended by eighty at the Beaverlodge Community Life Conference. A total of 49 home visits and 99 office interviews were arranged to assist individuals in the field of home designing. Also 517 phone calls and 414 letters answered special problems.

DISTRICT HOME ECONOMISTS

Personnel as of December 31, 1954

Berwyn	Elizabeth Mitchell	Grande Prairie	Patricia Seldon
Brooks	Mrs. Norma Gray	Hanna	Mrs. Lorraine Rea
Calgary	Lillian Popoff	Lethbridge	Elizabeth Bartman
Camrose	Nancy Hooper	Red Deer	Marian Dixon
Claresholm	Jacqueline Donaldson	Stettler	Margaret Fargey
Edmonton	Lila Engberg	Vegreville	Marion Inglis
Edmonton and at large		Westlock	Joyce McCutcheon
	Mrs. Margaret McCrimmon	Wetaskiwin	Mona Breton

Resignations

Shirley Holms	Wainwright
Caroline Judson	Home Designing Specialist

Leave-of-absence and Transfer

Margaret Smith	Red Deer to Fairview School of Agriculture
Lila Engberg	Lethbridge to Edmonton

Transfers

Priscilla Mewha	Edmonton to Assistant Supervisor of 4-H Clubs
Elizabeth Bartman	St. Paul to Lethbridge

Appointments

Jacqueline Donaldson	Claresholm
Elizabeth Mitchell	Berwyn

The District Home Economists report a busy year, although, due to the exceptionally wet spring and summer and the resulting postponements and rearrangement of meetings, it was a most difficult one in which to reach the outlying areas and homes. For this reason the number of meetings is slightly lower than last year but the average attendance increased since more work, of necessity, was done in the larger populated areas with good roads. Also, a special effort was made to make home visits more effective through a program of planned projects.

The Home Economists continue to report many requests for demonstrations and assistance which cannot be met for several months. Assistance during the summer months from the Home Economists at the School of Agriculture was limited due to three taking leave-of-absence and three resigning, leaving only two experienced Home Economists.

Clothing and Home Sewing

Home sewing and wise buying of fabrics and ready-made clothing are being recognized by many homemakers as means of stretching the family finances and still maintaining or improving the standard in clothing. In many cases, stretching the dollar is a necessity this year, in other cases there is a desire to save for new and inviting types of household equipment now available on the market. The demand for sewing clinics in most of the Home Economists' areas cannot be met if other work is to receive attention and a large number of requests are still on hand. One hundred and forty-seven sewing clinics were attended by 6,745 women. These

varied from one to five days with 372 sessions being held. The practice of holding a one-day pre-clinic meeting to guide the homemaker in choice of pattern, fabric, etc. is proving most helpful in better use of time and more satisfying results from the clinic. The Home Economists report that sewing clinics are of value not only by assisting the homemaker in sewing but also by providing an opportunity for wider contacts which result in many requests for assistance in other phases of homemaking.

Lectures and demonstrations were given on related topics as follows: "Use and Care of the Sewing Machine"—58; "Speed Sewing", "Wardrobe Planning", "Dress Trims and Finishes", "Use of Patterns" and "Sewing Aids"—46; "Sewing for the Home", "Choice and Care of New Textiles", "Remakes", "Sewing Tips", "Children's Clothing"—86; "Making Dress Forms"—30; a total attendance of 7,227. Also, 155 lectures and demonstrations on clothing and sewing were given to Girls' Clubs. Seventy-three newspaper articles were prepared on topics related to clothing. Through home visits and office interviews 1,057 individuals were assisted with sewing problems.

While the majority attending sewing clinics are beginners, there is an increasing demand for more advanced types of sewing so that the Home Economists find it necessary to divide the group and to hold extra sessions.

Housing

There is a constant demand for assistance in planning new homes and remodelling older ones. Rapid changes are occurring in design, building and finishing materials. Home builders are anxious for advice in assessing the quality and usage of the new trends and materials. "Housing" provides a real challenge to the Home Economist in providing the latest information to ensure a choice of lasting quality and satisfaction with the funds available.

There were 141 new homes planned and 208 remodelled, repaired or improved. Ninety new kitchens were planned and 100 remodelled, as well as 65 living rooms remodelled. Fourteen lectures on home planning attended by 315, and 22 lectures on kitchen planning attended by 574, were given by the Home Economists. In addition, information was provided on building materials to 76 individuals.

At 236 meetings attended by 6,519, various phases of interior decoration, buying of home furnishings and equipment, and home safety were discussed. Individual assistance was given 789 persons in interior decoration including color schemes, floor coverings, curtains, slipcovers, furnishings, etc. and 86 newspaper articles were prepared on topics of housing and decorating. The Interior Decoration Home Study Course was sent to eight groups with a membership of 234.

In addition to the Rural Electrification Schools, 9 meetings, attended by 168, dealt with planning for and use of electricity. Thirty-seven individuals were assisted in planning for outlets, switches, etc. Thirty-eight individuals were assisted with problems of water systems, and thirty-two with heating problems.

Foods and Nutrition**Demonstration or lectures:**

No	Topic	Attendance
196	Food Preparation and Service	6,656
64	Food Preservation	2,239
11	Buymanship of Foods	434
17	Nutrition and Meal Planning	378
67	School Lunches	2,168
<u>355</u>		<u>11,875</u>

Sixty-nine of the above were meetings of girls' Food and Garden Clubs with a total attendance of 1,526.

A total of 52 school visits were made by District Home Economists during 1954 for the purpose of giving suggestions and materials to help teachers incorporate nutrition into their school programs, observation of school lunches, and talking to the children about food and health. The school lunch was discussed with 18 adult groups and 49 groups of children. Demonstration lunches were packed and mimeographed material was left with the children to take home.

In most of the districts, reports indicate that the packed lunches on the whole are very good. In some districts, most of the schools have a school lunch program of some kind. In other districts there are few reports of school lunch programs. As stated by one Home Economist, "The people seem interested enough to hear a speaker on the subject about once a year but are not interested enough to do anything about it".

There has been a considerable increase in the number of food demonstrations. About half of these were given in home kitchens, the remainder in halls using an electric oven and Coleman hot plate. The recent addition of an electric hot plate and also of a food mixer, as well as other additions to food preparation equipment will facilitate this work. Topics demonstrated have included "Meat Cookery", "Supper Dishes", "Busy Day Desserts", "Oven Meals", "Broiler Meals", "Salads That Satisfy", "Party Sandwiches", "Food Mixes", "Buffet Meals" and "Simplify Community Meals".

Three hundred and eleven home visits were made for the purpose of giving help with food and nutrition problems. In addition, the Home Economists report discussing topics such as meal planning, school lunches, food preservation and general food preparation during home visits made for other purposes. Reports show 1,782 individuals given assistance by telephone, letter or office interviews. As usual, much unrecorded assistance was given after meetings or at fairs or other public gatherings. The greatest number of requests for assistance has been in the field of food preservation. Other requests have included baking problems, use of electric equipment, low cost recipes, meat cookery, pressure cookery and other food preparation topics.

One hundred and fifty-eight newspaper articles prepared by District Home Economists dealt with food and nutrition topics. Further information was given in newsletters.

The food tasting panel met again at Brooks in January to test a variety of vegetables and fruits from the 1953 crop prepared for freezing by various methods. Samples of frozen meats were also presented for re-testing of various wraps. Interest in home freez-

ing continues to grow, and again this year much advice has been given regarding the selection of freezers and freezing of foods.

Girls' 4-H Club Work

The supervision of Girls' 4-H Clubs in the field is carried on by the District Home Economist under the Provincial 4-H Program. Instruction is given in most phases of homemaking—Foods, Clothing, Home Decoration, Gardening and Etiquette. Besides this the Home Economists guide the social and community work done by these clubs. A good opportunity is provided for contact with parents and for home visits if desired.

In 1954 the District Home Economists gave assistance to 194 Girls' 4-H Clubs with a membership of 2,482. One hundred and seventy-three achievement days were held with 10,282 people in attendance. The work at all of these achievement days was judged by one or more Home Economists and provided an opportunity to contact many adults.

This year the District Home Economists assisted in the arrangements for and spoke at 11 field days with an attendance of 875, 24 rallies with an attendance of 3,811, and 60 tours with an attendance of 1,024. In addition a number of the field staff assisted with the supervision and instruction at the Provincial Short Courses and Camps and Leaders' Courses held during the year.

Fifty-three District Regional or Local Leaders' Courses were held during the year. One Provincial Course for Leaders took place although two were planned for. Weather conditions prevented the holding of the second one. District Home Economists gave 17 radio talks dealing with 4-H Club work. Seventy former club members were given assistance in homemaking, educational and vocational problems. On an average, 33% of the District Home Economists' time was spent on club work.

The teams attending National Club Week taking part in the National Competitions were again successful. The Food Team placed first, Clothing second, and Garden third. Much of the success of these teams is due to the work done with them by the District Home Economist and indicates the high standard being achieved by the club members in general.

The interest in Girls' 4-H Clubs throughout the Province has increased greatly this year. In some areas the District Home Economists have been unable to handle all the clubs requested. The standard of work and the value received by the members and their families is increasing and the time spent by the District Home Economists in this work is proving worthwhile.

Home Management

There is a marked increase in interest in the buying, care and use of the new types of household equipment such as automatic washers, dryers, dish washers, freezers, etc. Homemakers are taking a more active part in community activities and are increasingly interested in time and energy savers. A total of 8,291 women attended 230 lectures and demonstrations on "Saving Time and Energy", "Buymanship and Care of Home Furnishings", "Equipment", "Textiles and Foods", "Planning Expenditures" and

"Home Safety". In addition, 470 individuals were assisted and 250 newspaper articles on these and related topics were prepared.

Handicrafts

Interest in craft work is so extensive the Home Economists must limit the time spent in order to meet the demands of other more basic fields of service. In order to encourage use of time and materials for production of useful and more beautiful crafts, lectures on Good Design were given on 98 occasions where sewing and crafts were being judged, such as fairs, W.I. and F.W.U.A. Conferences, etc. In addition, 114 demonstrations attended by 2,895 women were given on crafts such as rugmaking, leathercraft, glovemaking, textile painting, copper work, gift and bazaar ideas. Two hundred and seventy received individual assistance, eight of whom earn their living from crafts.

Other Demonstrations and Lectures

Topics related to etiquette, table setting, entertainment, special occasions and flower arrangement were given at 55 demonstrations attended by 2,063 women; also, 394 individuals were assisted and 9 newspaper articles prepared on these topics.

Four lectures were given on "Happy Family Relations" attended by 149 persons, and 32 individuals given guidance in this field.

There were seventy-five general talks outlining the services of this Branch, as well as 86 dealing with Women's Work, 118 with Girls' Club work and 13 on the Schools of Agriculture, the total attendance being 11,802. Specific information was given to 2,561 persons.

Short Courses, Field Days and Meetings

District Home Economists assisted in organizing, lecturing and demonstrating at 236 short courses and field days, 138 being in co-operation with the District Agriculturists, 20 the Canada Department of Agriculture, 7 the University Extension Service, and 12 Agricultural Service Boards. In addition, 146 meetings were at the request of other organizations such as Exhibition and Fair Boards, Rural Health Units, Department of Indian Affairs, Canadian Association of Consumers, Department of Education, Red Cross, Horticultural Associations, etc. Advice and assistance is also sought by such local organizations as Relief Services, Social Service Clubs, School Boards, etc.

The Home Economists were called upon to assist in arranging programs and entertainment at Conventions of Provincial and National organizations, e.g. Municipal District Convention, Provincial Beekeepers' Association, Women's Institute, Conference of Ministers and Deputies of Agriculture, etc.

Judging at Fairs, Conventions and Conferences

District Home Economists judged at a total of 105 fairs, conventions and conferences as well as 193 achievement days. "Standards for Judging" was discussed at 98 meetings. Assistance was given Fair Boards, Agricultural Associations, Women's Institutes and F.W.U.A.'s in revising their prize lists. Fifteen fairs were assisted in organization and 12 exhibits were prepared for fairs and conventions.

Radio, Newspaper and Newsletters

Home Economists gave 23 radio addresses and interviews. The decrease from last year is partly due to discontinuing the Grande Prairie Program, arrangement for which has been reorganized for 1955. In addition, regular news notes are prepared for use on "Call of the Land".

Five hundred and fifteen newspaper articles were prepared for 56 local newspapers in the Home Economists' districts. Fourteen of the Home Economists prepare regular weekly columns. The Home Economists have prepared 147 newsletters with a circulation of 4,448 giving timely information and announcements of new programs, services and publications.

Other Activities

The Home Economists assisted in scoring 31 farm families nominated for the Master Farm Family Award and also assisted in the district judging. Eight Home Economists are assisting with 10 Farm and Home Improvement Programs involving 139 families. This program is proving an excellent means of encouraging improvement in home practices and completion of projects undertaken with the guidance of the Home Economists.

SUMMARY OF ACTIVITIES

	1953	1954
Number of demonstrations	2,325	2,076
Field Days and Short Courses	210	236
Judging Fairs and Conventions	155	105
Total Attendance at above	112,347	111,736
Average Attendance	42	46
Radio Addresses	58	23
Publications distributed	95,731	97,755
Letters requesting information	14,630	14,325
Home Visits	2,930	2,961
Girls' Clubs	169	196
Office Interviews	4,659	4,681
Phone calls for information	8,111	8,176

Report of the Veterinary Services Branch

E. E. BALLANTYNE, V.S., D.V.M., Director

J. G. O'Donoghue, V.S., D.V.M., Extension Veterinarian

C. H. Bigland, V.S., D.V.M., D.V.P.H., Veterinary Pathologist

G. S. Wilton, V.S., D.V.M., Veterinary Pathologist

H. N. Vance, V. S., D.V.M., Veterinary Pathologist

F. E. Graesser, B. S. A., V.S., D.V.M., Micropathologist

General

During 1954, the disease picture was relatively stable with other years, except an increase in respiratory infections in poultry and swine erysipelas, both of which caused considerable concern.

The rabies, bovine tuberculosis and brucellosis programs progressed favourably. These are described in more detail below.

The laboratory work again increased (See Graph 2.) showing the reliance of livestockmen, veterinarians and others on this service to furnish accurate facts as far as possible on disease problems. Over a period of years a great deal of scientific information in the veterinary field has been accumulated through the laboratory which is of value to agricultural, public health, and wildlife activities. Periodically, members of the staff publish such material in the scientific journals for the information of others engaged in diagnostic and control work.

Rabies

The situation in 1954 was very encouraging. No cases occurred south of Westlock and Two Hills, in contrast to cases in 1953 as far south as the Lethbridge district. This was due to the extensive control program of wildlife in both forest and agricultural areas, as the disease was spread mainly by coyotes, foxes, and wolves. In the agricultural areas, the coyote was the chief offender, being responsible for at least ten cases in livestock and four in dogs. No doubt coyote bites accounted for many of the other livestock cases as well.

Fifty animals were positive to rabies tests when brains were examined at the Federal Veterinary Research Laboratory, Lethbridge. Approximately 10 to 15 more animals were diagnosed as infected by clinical symptoms. The following chart gives the breakdown according to species and months of the laboratory diagnosed cases.

	Dog	Coyote	Fox	Cattle	Hogs	Sheep	Cat	Horse	Total
January		1			1				3
February	2	1	1		3	2	1		9
March	1	4	1	1	1				8
April	3	2		4	3	1			13
May		1		1					2
June	3			1		1			5
July				2					2
August		1							1
September		1		2					3
October		1					1	1	3
November		1							1
December									
TOTALS	9	13	2	11	8	4	2	1	50

Approximately half of the above cases occurred in the M.D. of Athabasca No. 103. Others were at St. Paul, Smoky Lake, Bonnyville, Ft. McKay, Janvier, Two Hills, Jarvie, Dapp, Westlock, Whitelaw, Rycroft, Fairview, Tangent, Peace River, Slave Lake, Keg River, and Ft. Vermilion. At Ft. Vermilion and Keg River only one and three cases respectively were reported, compared to a very large number in 1952 and early 1953.

Due to a reduction of wildlife in the forest areas, the number of trappers employed by the Department of Lands and Forests was reduced, with the provision that they could be increased if needed. The following is the estimate number of kills in the forest areas from November 1952 to August 31, 1954.

Foxes	54,140
Coyotes	45,304
Lynx	9,856
Wolves	4,988
Bear	3,440
Skunk	664
Cougar	68
Fisher	18
Badger	4
Wolverine	2
Total Kills	118,484

In the agricultural areas approximately 60,000 to 80,000 or more coyotes were destroyed through the coyote control program. This will be explained in more detail in the report of the Field Crops Branch.

The Federal Health of Animals Division again vaccinated all the dogs north of 55°, the campaigns being organized by the District Agriculturists concerned. They report practically a 100% coverage, better than in the previous two years.

The Alberta Central Rabies Control Committee again actively furthered the control activities. To offset the possibility of indifference to the disease developing, thus increasing the danger of bites to humans and suspected animal cases not being reported, the Committee decided on a Fall and Winter educational program. Meetings were held in districts shortly after positive cases in animals occurred, at Smoky Lake, Slave Lake, Canyon Creek, Kinuso, Falher, Peace River, and Fairview. This was coupled with increased radio and press publicity. The amount of coyote control materials being used greatly increased following these meetings. They were also a factor in reaching practically 100% coverage in dog vaccinations.

The Director, who is Chairman of the Committee, wishes to express appreciation to the Department of Lands and Forests, the Department of Health, R.C.M.P., Federal Health of Animals Division, Field Crops and Extension Branches of the Department of Agriculture, and others who have co-operated so willingly in the control program.

A scientific report of the Alberta program was published in the Journal of the American Veterinary Medical Association. This has created considerable interest in the United States and other countries. Requests for reprints have come from as far away as the Belgian Congo.

Brucellosis Control

The loss from this disease appears to be decreasing, as very few reports are received now of serious abortion storms. Such reports were relatively frequent a few years ago.

(A) Calfhood Vaccination Program

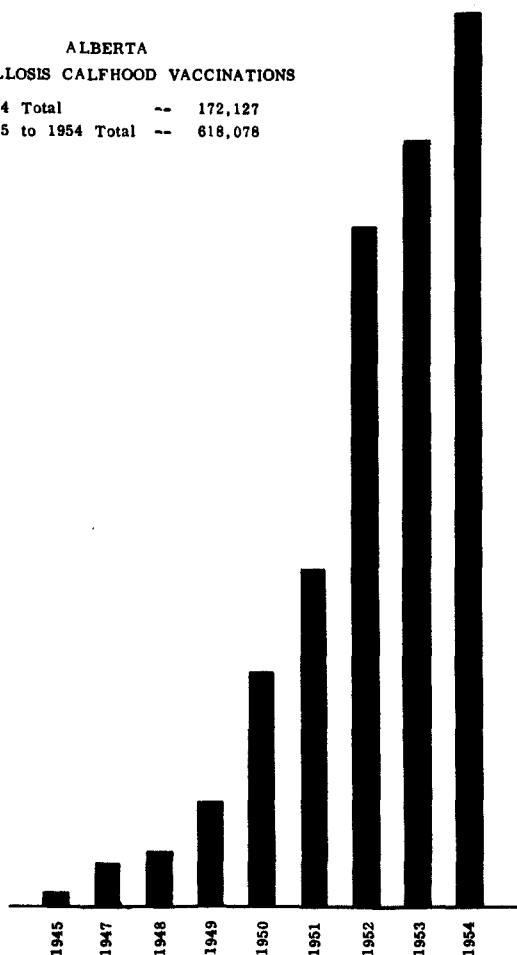
The total number of calves vaccinated during 1954 was 172,127, an increase of 24,644 over 1953. Due to the fine Fall weather, many calves in Southern Alberta will not be vaccinated until 1955. In some other districts where there were very poor crops, the number of calves is reduced because they had to be sold due to lack of feed. The following graph shows the increase in calfhood vaccination since 1945.

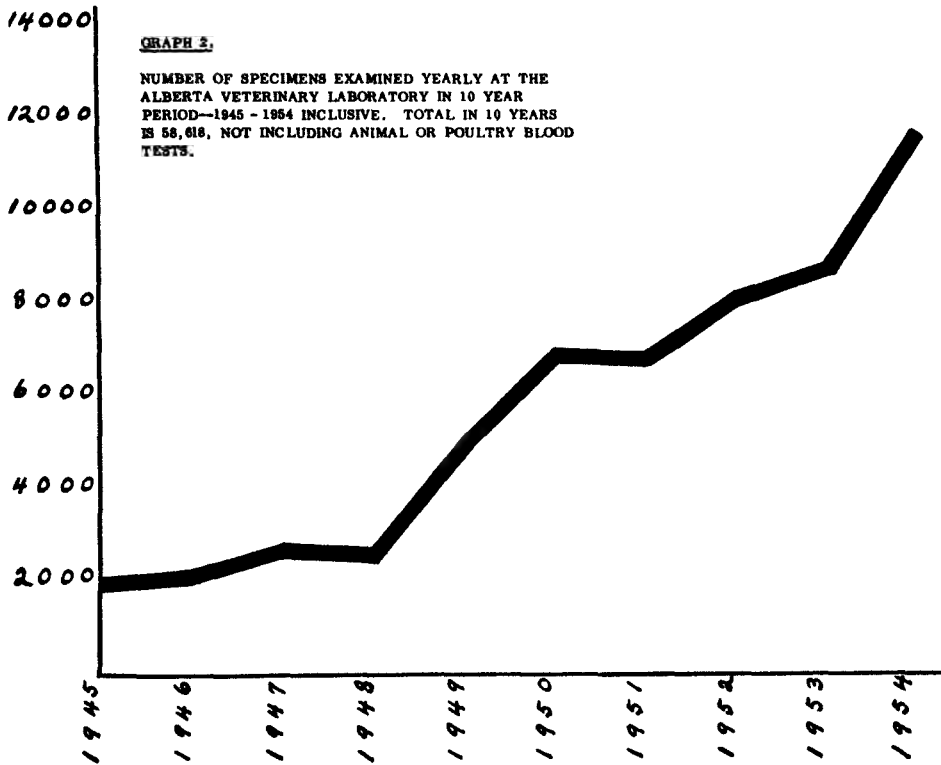
The large number of calves vaccinated was possible through the excellent co-operation of the veterinarians, livestockmen, and organized campaigns sponsored by Departmental and Municipal authorities.

To improve handling facilities for vaccination, an outline of a corral and chute was prepared. It was distributed to thousands of cattlemen by district agriculturists and through municipal offices.

ALBERTA
BRUCELLOSIS CALFHOOD VACCINATIONS

1954 Total	--	172,127
1945 to 1954 Total	--	618,078





(B) Brucellosis Restricted Areas

There are now eighteen municipalities operating as such areas, namely; Starland No. 47, Wainwright No. 61, Vermilion River No. 71, Minburn No. 72, Beaver No. 73, Strathcona No. 83, Camrose No. 63, Athabasca No. 103, Pincher Creek No. 9, Lamont No. 82, Wetaskiwin No. 74, Mountain View No. 49, Kneehill No. 48, County of Vulcan No. 2, Lacombe No. 64, Flagstaff No. 62, Eagle No. 81, and Morinville No. 91, the latter six being new in 1954. There are approximately 510,000 cattle in these areas, composed of 620 townships covering 23,000 square miles. Eight more municipalities are contemplating circulating petitions in 1955.

(C) Diagnostic Service

The number of agglutination tests for the diagnosis of bovine brucellosis totalled 15,090, which is an increase of 759 from the 1953 total. A high percentage of these tests were made to find out if the milk was safe to drink, as cattlemen are anxious to protect their families from undulant fever.

The following chart shows the result of blood testing in the animal section of the laboratory.

BLOOD TESTS FOR BRUCELLOSIS (BANG'S DISEASE) 1954

	Provincial Blood Tests	Per- centage	Dominion Blood Tests	Per- centage	Total Number of Tests	Per- centage
Number Positive	1,739	11.7%	3	1.5%	1,742	11.5%
Number Suspicious	1,035	7.0%	15	7.3%	1,050	7.0%
Number Negative	11,899	79.9%	186	91.2%	12,085	80.1%
Number Broken or Hemolyzed, Etc.	213	1.4%			213	1.4%
Total Number of Blood Samples	14,886	100 %	204	100 %	15,090	100 %

It is interesting to note that at two livestock auction markets in Brucellosis Restricted Areas, tests of approximately 500 run-of-the-mill cattle showed a 2.4 positive reaction.

T. B. Restricted Areas

In 1954, the Federal Health of Animals Division commenced testing in fifteen more municipalities and/or Local Improvement Districts, namely: L.I.D. No. 41, L.I.D. No. 149, Bow No. 40, Athabasca No. 103, L.I.D. No. 69, L.I.D. No. 46, Sturgeon No. 90, L.I.D. No. 10, Springbank No. 45, St. Paul No. 86, Flagstaff No. 62, Cardston No. 6, Pincher Creek No. 9, Conrich No. 44, County of Warner No. 5.

Over 200,000 cattle were tested. Private practitioners working as part-time employees of the Federal Department of Agriculture have given valuable service in the T.B. testing program. The Alberta Department of Agriculture defrays the livery charges concerning general tests in T.B. Restricted Areas.

Veterinarians

The following is the number of Albertans attending the Ontario Veterinary College as students.

First Year	4
Second Year	4
Third Year	2
Fourth Year	3
Fifth Year	4
TOTAL	17

The Department pays a \$200.00 grant to each on successful completion of the year's activities.

It is interesting to note that during the year fifteen more veterinarians established practices of their own or became associated with veterinarians already in practice. Two others took other employment, making a net increase of thirteen.

Sterility of Cattle

A questionnaire concerning the sterility problem was sent out to over 900 fluid milk shippers in the milk sheds of Edmonton, Calgary, Lethbridge, Medicine Hat, and Red Deer in December. An excellent response has been received. The information will be tabulated for a study project of a National Committee on Sterility in Dairy Cattle which was established by the National Advisory Committee on Agricultural Services.

A project at the laboratory was set up with the Edmonton Artificial Insemination Unit to study the cause of sterility in dairy

cattle that were sold as non-breeders. Over a period of a few years it is hoped to gain a great deal of information.

Vibriosis, which has been the cause of some of the sterility problem in the United States, European countries and Eastern Canada was diagnosed in six herds in Alberta in 1954. Artificial insemination is one of the methods of control. It was used on one of the infected dairy herds in the Edmonton district with excellent results.

T. B. of Poultry and Hogs

The educational program was continued with approximately 1,500 letters being sent to owners whose hogs showed evidence of infection. It is interesting to note that a considerable number of letters are received stating that the premises will be thoroughly cleaned and disinfected, plus a change in management practices to keep the poultry and hogs separate.

Extension Activities

The extension activities, under the direction of Dr. J. G. O'Donoghue, include lectures at the University of Alberta and Schools of Agriculture, supervision of the various livestock disease control programs of the Department, investigational and service trips, addressing meetings and supervision of the health of Government herds.

A. Investigational and Service Trips

Cattle	61
Sheep	5
Swine	43
Horses	4
Fur Animals	8
TOTAL	121
Meetings Addressed	68
Radio Talks	11

B. Investigational Notes

The following are brief reports on disease conditions not previously reported which are of current interest and economic importance:

1. Cattle

(a) Vitamin A Deficiency

For the second consecutive year vitamin A deficiency in beef calves and yearlings has been responsible for serious losses. Several cases of blindness in purebred yearlings, caused by this deficiency were investigated. The reported and investigated cases would represent only a small part of the total loss. Action has been taken to make the cattle breeders aware of this problem. Two articles dealing with the deficiency were published in scientific journals.

(b) Abortion

With the increase in Brucella vaccination, cattle breeders have shown an increased interest in abortion losses. This increased interest has resulted in the recognition of Vibrionic abortion in Alberta. It is caused by the *Vibrio fetus* organism and can be the cause of serious losses from abortion and sterility. Owners are

encouraged to report abortions in *Brucella* vaccinates and to forward material suitable for laboratory examination in every case.

(c) **Brucellosis**

Two surveys, dealing with *Brucella* vaccinations were commenced in 1954. Neither one has been completed yet.

1. Field efficiency of Strain 19 *Brucella* vaccine.

In partially vaccinated herds that have gone through *Brucellosis* abortion storms an effort has been made to compare abortion percentage in non-vaccinates and vaccinates.

Non-vaccinates % aborting	Vaccinates % aborting
31.3%	7.5%

2. Blood titres in animals vaccinated over 9 months of age.

In some districts there have been requests to eliminate Spring vaccination campaigns and to carry out mass vaccination of calves in the Fall months only. Such a procedure would necessitate animals being vaccinated at ages greater than 9 months. It is believed that such vaccinations will result in prolonged blood titres to the *Brucella* agglutination test.

At present, blood titres of animals vaccinated at older ages are being checked to determine the feasibility of a program of yearly vaccinations.

(a) **Malignant Catarrh**

This virus disease of cattle was recognized for the first time in Alberta in 1953. A second outbreak occurred in a dairy herd in 1954 resulting in five animals affected, with one death. It is unlikely that it will ever assume epizootic proportions.

(e) **Sterility**

A survey of the common causes of sterility in the Edmonton Milk Shed has been started. With the cooperation of herd owners, arrangements have been made to secure the reproductive organs of cows sold as non-breeders. The response in the first few months has been good.

(f) **Poisoning—Oil Well Sites—Asphalt**

There continue to be frequent investigations and reports of suspected poisoning of cattle at oil well sites. Lead poisoning is comparatively common on such locations but it is possible that certain drilling mud components can result in permanent injury to the digestive tract.

To this end, experimental work commenced in 1953 was continued through this year but still requires further investigation.

Similar investigations are being followed to ascertain the toxic effects, if any, of the asphalt used in paving.

2. **Swine**

(a) **Erysipelas**

There is still a high incidence of the acute form of *erysipelas* and it will in all probability continue. Since control of losses depends largely on early recognition and treatment, educational efforts are being pressed.

(b) Dermatitis

This is a skin condition, believed to be of nutritional origin that has shown a marked increase in the last two years. It is most common in the colder seasons of the year. It has also been prevalent in Eastern Canada and parts of the United States. It has occurred throughout Alberta. Comprehensive investigations of the condition are being carried out.

(c) Rhinitis

All herds or origin of swine going to the Royal Winter Fair were inspected for Rhinitis. All premises inspected were free of the disease.

3. Fur Animals**(a) Mink**

Distemper, a virus disease of mink, remains one of the most important disease problems in these animals.

Distemper outbreaks were confirmed on 18 mink ranches in 1954. Because of the constant danger of the disease there is a trend towards the routine immunization of mink with the live virus vaccine being given a preference for this purpose.

(b) Distemper Vaccine Bank

The purpose of the bank is to maintain a readily available supply of mink distemper vaccine. The vaccine is supplied to ranches at cost price. In 1954, 6,450 doses of vaccine were supplied to 28 ranchers.

(c) Alberta Distemper Vaccine Assistance Plan

This plan has been in effect since 1950 and was originally formulated at the request of the Alberta Fur Breeders. The regulations require that at least 66 2/3% of the ranchers in a district make application to the Minister, such application to be accompanied by an assessment of five cents per head for every animal on the ranch as of July 1. The rancher agrees to maintain accepted standards of sanitation and to follow disease prevention practices. The program is effective from September 1, to August 31 of the following year. It must be renewed yearly.

The Department agrees to supply, free of charge, mink vaccine for confirmed distemper outbreaks on the ranch of a subscriber. In addition, vaccine is available at half cost price to any subscriber within a defined dangerous area of an infected ranch.

There are 95 ranchers enrolled for the current year.

Period: September 1, 1953-August 31, 1954

Distemper Outbreaks	Vaccine Issued Free	Vaccine Issued Half Price
18	16,180 doses	400 doses

Period: September 1, 1954-December 31, 1954

Distemper Outbreaks	Vaccine Issued Free	Vaccine Issued Half Price
4	3,900 doses	390 doses

(d) Autogenous Vaccine—Mink Distemper

This vaccine is produced from distemper infected mink. The time required for its production makes it impracticable for routine use but it is prepared for infected ranches following the initial

use of commercial vaccine. It is of value in checking losses in a particularly severe outbreak.

In 1954, 19,116 cc. of autogenous vaccine were supplied to 14 fur ranches.

C. *Leptospira*

The Branch has cooperated with the Provincial Public Health Laboratory in a preliminary survey to determine the possible presence of this infection in domestic stock in Alberta.

Animal Disease Section

The annual number of specimens examined in this section of the laboratory, under the direction of Dr. G. S. Wilton, assisted for seven months by Dr. H. N. Vance, continues to increase. 5,055 specimens were examined compared to 4,419 last year, an increase of 15%, in spite of the fact that the number of heads going through the laboratory for rabies examinations decreased from 294 in 1953 to 111 in 1954. There were 31 specimens from this lot found to be infected with rabies. In addition to 5,055 animal specimens there were also 15,090 bovine blood samples tested serologically for Brucellosis. The majority of the animal specimens were cattle and swine, but the total number came from 26 different species of animal.

A rapid and accurate diagnosis is the main purpose of the laboratory. Each animal examined invariably saves the lives of many on that farm, or provides information to prevent a repetition of the condition. A diagnosis often affects the whole community. An example of this would be the diagnosis of Blackleg, Malignant Oedema, Brucellosis, Erysipelas and many others.

TABLE 2—SPECIMENS

Species	Live	Dead	Portions	TOTALS
Anteater			3	3
Antelope			4	4
Bear			2	2
Beaver		1		1
Cat	1	15	15	31
Cattle	20	56	1,044	1,120
Chinchilla	4	54		58
Cougar			1	1
Coyote		3	51	54
Dog	2	48	217	267
Fish		1		1
Fox		2	5	7
Goat		2	1	3
Guinea Pig		4	2	6
Horse		1		1
Lemming		9	30	39
Lynx		3	2	5
Mice		13		13
Mink	108	143	1	252
Monkey		2	5	7
Moose			13	13
Rabbit		32		32
Rat		2		2
Sheep	9	46	59	114
Swine	123	494	1,088	1,705
Wolf		12	1	13
Laboratory Animals			384	384
Blood Samples			234	234
Fecal Samples			32	32
Feed Samples			49	49
Milk Samples			457	457
Semen Samples			9	9
Urine Samples			30	30
Water Samples			28	28
Miscellaneous Samples			78	78
TOTALS	267	943	3,845	5,055

Laboratory Animals

These animals were used to assist in making a diagnosis, to determine the pathogenicity of the bacteria isolated and for experimental work. They were carefully examined and cultured.

Guinea Pigs	362
Rabbits	13
Mice	5
Chickens	3
Pigeon	1
TOTAL	384

Biological Products

Autogenous bacterins and vaccines have been prepared at times throughout the year to help fight certain disease outbreaks in livestock. The table below lists the product, the amount, the species of animal involved and the disease.

Product	Amt. in CC's	Species of Animal	Disease
Autogenous wart vaccine	630	Bovine	Bovine Papillomatosis
Autogenous wart vaccine	100	Canine	Canine Papillomatosis
Autogenous Mink Distemper vaccine	24,066	Mink	Distemper
Autogenous Mixed bacterin	1,900	Bovine	Pasteurellosis
Autogenous Mixed bacterin	500	Porcine	Pasteurellosis

Poisons

The Provincial Analyst, C. E. Noble, examined 402 specimens for the animal disease section of the Veterinary Laboratory during 1954. He found 43 cases of chemical poisoning which can be broken down as follows:—13 arsenic poisoning (cattle, dog), 6 cases of lead poisoning (cattle, swine and chincilla), 5 cases of mercury poisoning (cattle and swine), 1 case of nitrate poisoning in cattle, 1 case of salt poisoning in swine, 17 cases of strychnine poisoning in dogs. Other cases of poisoning that could be mentioned—5 cases of plant poisoning (cattle and horse), 6 cases of sweet clover poisoning (cattle), 3 cases of algae poisoning (swine and cattle).

Mastitis

The practitioners always submit a number of individual milk samples, many of them from acute cases of mastitis.

MASTITIS TABLE

Hemolytic staphylococci	132
Hemolytic streptococci	68
Hemolytic colon	11
Corynebacterium	3
Mixed Infections (staph. strep. colon)	18
Negative	225
TOTAL	457

Salmonellosis (Paratyphoid)

This infection is transmissible to man and is therefore, of public health importance. The following table lists the type identified, the species of animal, the age, the location or material from which the isolation was made and the district.

Type	Species	Age	Location	District
Salmonella cholerae-suis	Porcine	11 wks.	Stomach	Richdale
Salmonella typhi-murium	Bovine	Adult	Feces	Innisfail
Salmonella tenessee	Bovine	Adult	Feces	Innisfail
Salmonella typhi-murium	Bovine	Adult	Intestine	Acme
Salmonella typhi-murium	Mink	1 yr.	Intestine & Gall bladder	Calgary
Salmonella typhi-murium	Bovine	Adult	Liver	Morley
Salmonella typhi-murium	Mink	1 yr.	Intestine	Calgary
Salmonella typhi-murium	Bovine	5 yrs.	Intestine	Calgary
Salmonella typhi-murium	Bovine	1 month	Intestine	Clover Bar
Salmonella typhi-murium	Bovine	Adult	Intestine	Calgary

Vibriosis in Cattle

The organism *Vibrio fetus* was isolated in Alberta from at least five different herds in the year. History and blood tests would suggest that other herds have been infected. Due to the greater importance of brucellosis and the difficulty in growing the *Vibrio fetus* organism, this disease received little attention until a few years ago. A herd that is having breeding difficulty must be studied for vibriosis as well as brucellosis and other genital conditions. In addition to isolating the organism from five different herds arrangements were made for testing 179 blood samples. This test is not nearly as conclusive as the Brucella agglutination test for Bang's disease but it does provide information on a herd basis. If the organism is also isolated from one of the aborted fetuses then the diagnosis is confirmed.

Blackleg and Allied Diseases

Several reports of blackleg or similar diseases occurring in previously vaccinated animals were reported in 1952-1953. In a survey conducted by this Department through Veterinary practitioners, 280 such cases on 68 premises were reported. While this represents considerable loss, it should be emphasized that vaccination is generally very successful, and breaks have only rarely been reported previously. Many of the cases were not typical of blackleg or malignant oedema, but were obviously infections with one of the gas gangrene group of bacterial organisms.

Bacteriological and other studies have been and are presently being conducted at the Alberta Veterinary Laboratory and other institutions. This work is not complete, but it is likely that either different antigenic strains of the bacteria contained in the bacterin, or organisms not present in the bacterins usually used are responsible for the losses.

Lungworm Infestations

During 1954, 12 specimens were received from which lungworms (*Dictyocaulus* species) were recovered, 8 from sheep and 4 from cattle. Affected premises were North to Grande Prairie, West to Sangudo, East to Vermilion and South to Brooks. Lungworm infestations had been observed only occasionally in previous years.

These parasites can cause serious losses in sheep and cattle through stunting and by predisposing to pneumonia and other diseases. Young animals are affected most seriously, with the mature animals acting as a reservoir of infection and often not showing symptoms. It is probable that there is also a reservoir in wildlife, since wild ruminants are affected with the same parasite. The unusually wet grazing seasons of the past 2 years may have contributed to the apparent increase in the disease, since it is favoured by moist conditions.

Control at the present time depends on preventing exposure of susceptible animals through pasture rotation, adequate drainage, and separate water supply for infected and non-infected stock. Care should be exercised in purchasing additions to herds and flocks.

Swine Erysipelas

Examination of records of the past 3 years shows an approximate 40% annual increase of specimens submitted with this disease. In 1954 there was a total of 134 cases. There may not be a corresponding increase in total field cases, but the disease is the most common infectious disease of swine, and a subject for concern.

Mink Diseases

There were 252 mink specimens examined at the laboratory during the past year. Distemper continues to be the dreaded disease and 124 or approximately 50% of the animals examined were thus infected. This number of specimens came from 18 different outbreaks. Food poisoning is still a big problem, 57 such cases being found. Rickets, nutritional anemia and nursing sickness were other common conditions.

Yellow fat or steatitis in mink was a problem in Alberta the past year. The reason for more cases this year, no doubt, was due to the difficulty in obtaining sufficient good feed supply. Considerable fish was shipped in and some of it was not held at proper refrigeration temperatures at all times. Vitamin E helped early cases along with a change of feed.

Three out of four animals examined from one ranch were found to be infected with Avian tuberculosis. One animal was also infected with *Salmonella typhi-murium*. Both infections followed the use of infected chicken entrails and heads as mink feed.

Poultry Disease Section

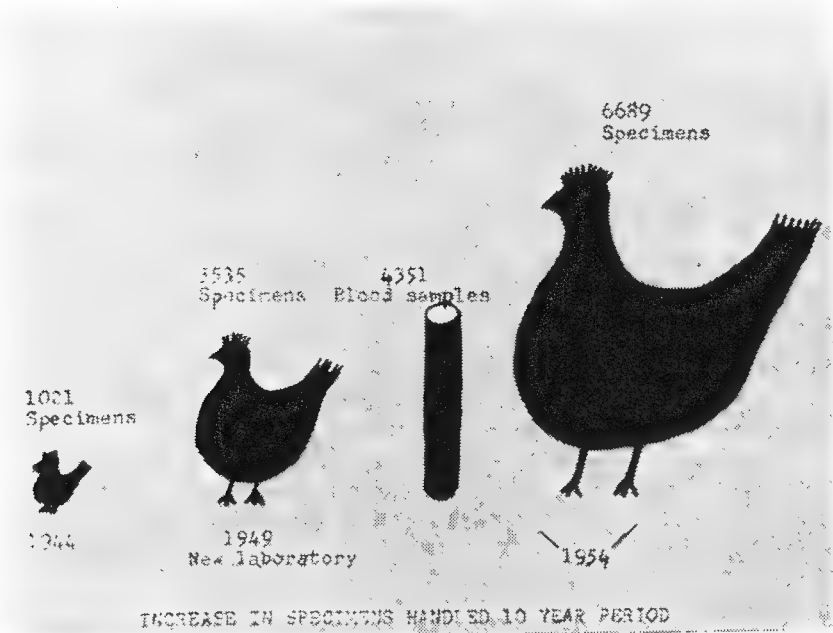
The work of the Poultry Disease Section, under the direction of Dr. C. H. Bigland, assisted by Dr. H. N. Vance for five months, is devoted mainly to the accurate diagnosis of diseases of poultry. Specimens are submitted by veterinarians, farmers, poultrymen, hatchery operators and feed company representatives from all points in Alberta.

Disease is recognized as one of the greatest threats to successful poultry production. The monetary loss through poultry disease in Alberta is great and has been known to be many thousands of dollars even on one individual farm. The control and prevention of disease is especially important to the expanding broiler industry and to farms where the size of turkey or chicken flocks is increasing. Accurate diagnosis and speedy dissemination of this information is essential to such control and prevention and so to this end, every effort is put forward.

A great increase in the number of specimens handled by this section was observed in 1954. The number of birds and portions diagnosed was **6,689** (an increase of 2,158 or approximately 47% over 1953) together with **4,351** blood samples processed (an increase of 3,534 over 1953).

The approximate number of farms serviced was **2,368** (an increase of 717 or 43% over 1953).

The following diagrammatic chart gives an idea of the increasing volume of work that the Poultry Disease Section has been called upon to handle in that last decade. The middle period of 1949 was the year the new Veterinary Laboratory was opened with the allotment of a veterinarian to devote full time to poultry pathology.



Another diagrammatic chart is attached to emphasize that although there are over 60,000 farms carrying poultry in the province, this laboratory had representation from almost 4% (3,193) of these. The importance of this figure not only rests with the number of Albertans gaining benefit from the work of this laboratory, but also brings the figures of the disease tables more into line with statistical accuracy.

Although over 6,689 specimens were examined, every effort was expended to give each a careful post-mortem examination together with bacteriological, serological, micropathological, parasitological, fungus and chemical studies when necessary to ensure accuracy of diagnosis. When such a diagnosis was established, the information was speedily given to the Veterinarian, the owner or his agent together with recommendations for treatment, control or prevention. To this end many telegrams were sent and **4,387** letters mailed from this section (an increase of 1,147 letters or 35% over 1953).

(1) Poultry Disease Picture

Part of the increase in poultry specimens and submissions to this laboratory in 1954 could be attributed to a respiratory infection that attacked a great many of the chicks and some turkey poults in the Spring of the year. As far as could be determined this condition resulted in great losses in the chick population—(estimated at approximately 10-15%). (See further discussion.)

As in past years, many poultry losses appeared to be due directly or indirectly to improper poultry management and sanitation. The majority of such losses occurred in the farm flocks.

The increase in blood samples processed was mainly due to an Infectious Bronchitis blood test survey being conducted.



FIGURE 1. SUBMISSIONS BY YEAR FOR ALL DISEASES

Aside from the following disease conditions noted, the remaining were fundamentally similar to the year 1953. Detailed statistics will be included in the report of the Veterinary Services Branch.

(2) Respiratory Disease

Approximately 500 submissions of a respiratory infection were received in 1954. This figure represented approximately 20% of all submissions. A few cases similar to Chronic Respiratory Disease were diagnosed in older birds in January and February. This condition however, appeared in chicks flowing into the laboratory through March, April, May and June. About the middle of the month of May the first case of Newcastle Disease was diagnosed. The latter condition appeared to be superimposed on the respiratory disease previously encountered. By the end of June most of the outbreak of Newcastle Disease and the respiratory disease appeared to be over—except for the odd case in July. However in October, November and December several cases similar to the Spring outbreak of respiratory disease were found in broiler chicks.

In an effort to establish a diagnosis, specimens were taken from any live sick birds in the shipments. As we do not have the facilities for virus diagnosis at this laboratory, the Dominion Animal Diseases Research Institute extended their assistance and the majority of

such specimens were submitted to Hull, Quebec for further work. In the fall and winter, the Connaught Medical Research Laboratories, Toronto, and the Ontario Veterinary College also kindly worked with some specimens. Although nothing definite could be found in the majority of the specimens, evidence of the causative agent of Newcastle Disease was found in approximately 110 specimens, evidence of the causative agent of Infectious Bronchitis in a few and evidence of the P.P.L. organisms, so often associated with Chronic Respiratory Disease, from a few more.

Seventy-five chickens, turkey poults and pheasants were also injected as a presumptive test for Chronic Respiratory Disease—all were negative.

(3) Newcastle Disease

One hundred and thirty-six cases of Newcastle Disease were diagnosed in 1954 in specimens handled at this Laboratory. As far as could be determined, the majority of these originated at one hatchery or in hatcheries in liaison with this hatchery.

The use of live virus vaccination (Blacksburg strain) was employed to a greater extent in 1954, primarily to protect broiler chicks against Newcastle Disease; in many cases this was combined with Infectious Bronchitis vaccination. Approximately 83,600 doses of Newcastle Disease vaccine were reported as used in 1954, 61,000 of which were combined with Infectious Bronchitis vaccine.

(4) Infectious Bronchitis

The virus of Infectious Bronchitis was isolated a few times from specimens submitted from this laboratory. These few isolations however, may not convey the true picture of this condition in Alberta as serological evidence in a blood test survey conducted in 1951-52 indicated that 72.2% of our birds at that time had contacted the virus although it apparently had done little harm. Another Infectious Bronchitis survey is now being conducted through the Provincial Poultry Branch and the Animal Diseases Research Institute. This is not completed as yet but preliminary results appear to indicate a similar percentage of immunity through exposure to the Infectious Bronchitis virus. There is a possibility that such exposure may be directly related to the respiratory disease encountered this Spring.

As mentioned above, many broiler chicks have been vaccinated against this disease.

(5) Avian Tuberculosis

Although this disease has been controlled in other provinces and countries by good poultry management, it is still costing Alberta poultrymen, hog raisers and the consuming public many thousands of dollars annually. Avian tuberculosis was diagnosed in **256** specimens from **134** farms in 1954 compared with 176 specimens from 92 farms in 1953 (an increase in isolations of 42 or 45% over 1953 figures).

The educational campaign to acquaint poultry and hog raisers with tuberculosis control again continued in 1954 by way of letters, pamphlets, motion pictures, etc.

(6) Paratyphoid Infection (Salmonellosis)

The incidence of paratyphoid infections of chicks and poults was greatly increased in 1954. Paratyphoid organisms were isolated from **498** poults and chicks from approximately **225** different farms in 1954 as compared with 338 birds from 80 farms in 1953. (An increase in affected farms of 145 or 181% over 1953 figures).

As these organisms are transmissible to humans and because future control measures may hinge on the types encountered, each isolation was submitted to the Alberta Public Health Laboratories for typing.

The following table gives the types isolated from poultry in 1954. Many of the same types are also being isolated from human infections in Alberta.

SALMONELLA TABLE

Type	Number
S. thompson	72
S. bareilly	66
S. typhi-murium	57
S. heidelberg	7
S. bredeney	4
S. kentucky	3
S. derby	2
S. oranienburg	2
S. newington	2
S. give	2
S. bovis-morbificans	2
Not typed	6
	225

(7) Pullorum

The number of isolations of *Salmonella pullorum* was higher than last year. This organism was isolated from **549** chicks and poults from **134** farms in 1954 as compared with **473** birds from **109** different farms in 1953 (an increase of 25 affected premises or approximately 23% over 1953).

The whole blood testing for pullorum of all birds producing hatching eggs is carried out by the Provincial Poultry Branch and is highly instrumental in the control of this disease in Alberta.

In co-operation with a Dominion-wide agreement on pullorum, all cultures were submitted to the Ontario Agricultural College for typing.

The following table gives the types found for the last 6 years.

PULLORUM TABLE

	1949	1950	1951	1952	1953	1954
Standard	33	22	34	70	58	83
Variant		2	5	39	21	47
Intermediate	7	9	7	11	30	8
Not Typed						5
TOTALS	40	33	46	120	109	143

(8) Fowl Typhoid

The number of farms on which Fowl Typhoid was diagnosed in 1954 rose from **19** in 1953 to **31** in 1954 (an increase of 12 farms or 63% over 1953). Each case was attended with heavy loss of chickens and turkeys. As in past years most of these cases were west of Edmonton mainly in the Mundare, Willingdon, Vegreville and Two Hills districts.

This disease is still reportable by law to the Dominion Health of Animals Division. However, the Dominion slaughter eradication program had to be discontinued.

The Provincial educational campaign of 1952 met with some apparent success in 1953 but this appeared to be overcome in 1954.

It would appear that more stringent measures are necessary for the control of this disease in Alberta.

(9) New Diseases

Hexamitiasis, a protozoan disease of young turkey poults, increased to 11 cases from 3 last year. Ulcerative enteritis, a disease of some wild birds in captivity and turkeys, was diagnosed in 1 imported bob-white quail, and was responsible for considerable losses in a pheasant rearing establishment and 1 domestic turkey flock. A disease very similar or identical to Avian encephalomyelitis was seen in 3 flocks of young chicks. However, the presence of the causative agent, a virus, was not confirmed.

Scientific Papers

Two short papers were prepared in co-operation with Dr. Graesser and submitted to the Canadian Journal of Comparative Medicine for publication. Another paper entitled "Fowl Typhoid Control in Alberta" was submitted for reading at the American Veterinary Medical Association Convention in Seattle.

Poultry Extension

Upon the request of local Veterinarians, three trips were made to poultry farms to investigate major disease losses. Information on poultry disease was given in four addresses to producer groups and one radio address. Three meetings of the Alberta Poultry Disease Committee were attended. One lecture on poultry disease was given at the Vermilion School of Agriculture. The annual Hatcherymen's Short Course was held again in 1954. An address was given at the Canadian Confederation of Hatcheries Association Convention held in Winnipeg. Several meetings of the Alberta Veterinary Association were attended in Red Deer, Edmonton and including the annual convention in Lethbridge.

Projects Other Than Poultry Diagnosis

In co-operation with a program on Salmonella control as formulated at the Canadian Poultry Disease Conference, an experiment was conducted on the effect on hatchability of eggs dipped in disinfectant solution. The above was conducted at the Provincial Poultry Plant with the consent of Mr. F. J. Higginson, former Poultry Commissioner and the active assistance of Mr. R. H. McMillan, present Poultry Commissioner.

Another experiment in the same project included the hatching of eggs infected with Salmonella, both dipped in various disinfectants and undipped. The chicks hatched from this experiment were held and tested at intervals to ascertain the percentage of birds still able to excrete infective organisms.

Micropathology Section

This section, under the direction of Dr. F. E. Graesser, functions as an important adjunct to the diagnostic services which are

offered by the laboratory. Characteristic pathological changes are produced by most disease conditions, and frequently these may be recognized only by a microscopic examination of the tissues. In certain virus diseases, such as distemper in mink and dogs, infectious hepatitis, and rabies, histopathological work is essential in order to arrive at a positive diagnosis. The identification and classification of the many types of tumours which are encountered provides further scope for the micropathologist.

In addition to the histopathological work, this section produces photographic slides and prints for use within the Branch, as well as preparing and mounting specimens for display and educational purposes.

1. Histopathological Sectioning

During the year, 1,270 sections were prepared and examined from a total of 1,065 submitted tissues. This represents a substantial increase in the number of examinations over those of the previous year. The following table indicates the annual totals of tissues sectioned since the inception of a micropathology department in 1949.

Species	TISSUES SECTIONED SINCE 1949					
	1954	1953	1952	1951	1950	1949
Domestic Animals	468	375	292	252	166	49
Fur-Bearing Animals	223	317	188	302	137	77
Poultry	359	151	92	122	73	17
Miscellaneous	15	18	28	5	3	5
TOTALS	1,065	861	600	681	379	148

The increase over the past year is particularly apparent in the submission of tissues from domestic animals and poultry, which considerably offsets the decrease in the number of fur-bearing animal submissions. Distemper outbreaks were less prevalent than in 1953, resulting in fewer bladders being received for sectioning. A total of 199 mink bladders were examined histopathologically, of which 108 showed inclusion bodies indicative of distemper. These represent outbreaks on 18 different premises.

A large number of neoplastic growths, or tumors, were received during the year. The majority of these were submitted by veterinarians requesting information regarding classification and to what extent, if any, malignancy was present. Detailed reports on each were prepared and sent to those concerned. Of 108 tumors submitted, 56 were found to be malignant.

2. Preparation of Material for Extension Purposes

Photographic services are provided by this section as required by the various members of the veterinary staff. During the year, 70 colour transparencies and 13 black-and-white slides were made to further augment the series on the diseases of poultry and domestic animals. Approximately 220 photographic prints were produced for the Branch, to be used for reference purposes and to illustrate articles prepared for publication.

In addition to the above, 38 animal specimens were prepared and mounted for display and educational purposes.

In collaboration with the Poultry Pathologist, Dr. C. H. Bigland, a paper describing a case of sex reversal in a hen has been written and submitted for publication.

Report of the Schools of Agriculture Branch

R. M. PUTNAM, Superintendent, Schools of Agriculture

J. E. Birdsall, Principal, Olds School of Agriculture

N. N. Bentley, Principal, Vermilion School of Agriculture

J. E. Hawker, Principal, Fairview School of Agriculture

The Schools of Agriculture enjoyed another successful year in 1954. At the graduation exercises held on April 7th at each school the following diplomas were presented:

	Olds	Vermilion	Fairview
Diplomas in Agriculture	61	66	36
Diplomas in Home Economics	14	16	9

The introduction of typing and employment training into the course in home economics has been a desirable venture as far as it can be determined at present. The students liked these courses; this type of training assisted them to secure employment and there is some evidence that the addition of typing encouraged more girls to attend the schools.

During the fall of the year representatives of the school staff attended conventions of the Alberta Teachers' Association.

The arrangement made in 1952 at Vermilion whereby students from the town schools received instruction before and after the regular term of the School of Agriculture at the latter institution was continued. A similar arrangement covering instruction in shop and home economics was made at Fairview.

In addition to the foregoing co-operative arrangements, a plan was worked out with the Town of Vermilion whereby the services of the instructor of recreation and mathematics at the School of Agriculture were made available to the Town for the summer months for the purpose of organizing a recreation program. This plan has operated successfully and will likely be continued.

The annual fall staff conference was held at Vermilion on October 5th and 6th. The conference was of particular value to the seventeen new staff members who joined the service during the year.

Board of Agricultural Education

The annual meeting of the Board of Agricultural Education was held on June 29th. The Honourable L. C. Halmrast, as the new Minister of Agriculture, attended the meeting and spoke to the members. Reports on the operation of the schools were presented and discussions took place on such topics as agricultural training in high schools, scholarships and bursaries, changing requirements for admission to university, etc. The Board requested that information be obtained on the Danish Folk High Schools.

The 1954-55 Term

The opening date of the Schools at Olds and Vermilion was postponed from October 19th to October 26th, due to the lateness of the harvest season. Fairview opened as scheduled.

Enrolment for the 1954-55 term was about equal to that of the previous fall, except for Fairview where a decline occurred.

Agriculture:	Olds	Vermilion	Fairview	Total
First Year	49	49	12	110
Second Year	34	38	18	90
Two-in-One	31	28	4	63
Home Economics:				
First Year	14	20	13	47
Second Year	16	15	7	38
Two-in-One	13	8	1	22
TOTALS	157	158	55	370

Maintenance and Construction

No major building program was undertaken at any of the schools during 1954. Twenty-five rooms in the boys' dormitory at each school, Olds and Vermilion, were renovated by building in bunks and study tables. At Olds the sewing room was remodelled and redecorated and the school was connected to the town water system as a precautionary measure. General repairs and maintenance were undertaken as required.

Summer Program

The summer program at the Schools of Agriculture followed the same general pattern as in previous years. A 4-H Club Week and the Farm Women's Week were held at each school. Other events at Olds were the Club Leaders' Conference, W.I. Girls' Club Convention and Provincial 4-H Club eliminations. At Vermilion the annual Vermilion Fair Camp was held as in previous years. In addition to these major events a large number of smaller meetings and gatherings were held at the schools.

Appreciation

The Schools of Agriculture have many friends in Alberta and elsewhere in Canada. A number of these friends express their interest in the education of young people by providing funds for scholarships, bursaries and prizes. Other individuals and organizations support the schools in many ways.

To all of these friends we desire to express our appreciation for this support and assistance and trust that in the years to come they will continue to observe tangible evidence of the results of the training offered in the Schools of Agriculture.

Appreciation is also expressed to those officials of the Federal Government and the University of Alberta who have in any way contributed to the operation of the Schools and last but not least, to the officials of the Alberta Department of Agriculture who have in any way assisted with the operation of the schools.

Canadian Vocational Training

The rural electrification schools, which were first organized in 1952, were continued in 1954.

During the period January 1st to March 31st, twelve schools were held at the following points, with a total attendance of 523 people: Cardston, Westlock, Taber, Mayerthorpe, Olds, Ryley, Three Hills, Sedgewick, Hanna, Vermilion, Coronation and Waskatenau.

These schools were conducted by the Department of Agriculture with funds provided jointly by the Department of Education and the

Canadian Vocational Training Branch of the Federal Department of Labour. The Electrical Inspection Branch and the Co-operative Activities Branch of the Department of Industries and Labour provided staff and assistance. The Alberta Power Commission and the power companies also furnished staff to assist in instructing the students. The spring schools were conducted by two instructional staffs consisting of two men each. In the limited time available for the schools the provision of two sets of instructors allows twice as many schools to be held.

The schools were continued in the fall of 1954, but on a somewhat different basis. The duration of the schools was reduced from two weeks to one week by eliminating the practical work in wiring. The Department of Agriculture once again conducted the schools with funds provided by the Federal Department of Labour and the Department of Education. As in previous years, the Electrical Inspection Branch, Co-operative Activities Branch, Power Commission and the power companies assisted in organizing the schools and providing instruction.

During the period from November 15th until the end of December three schools were held at which the total attendance was 212. These schools and the attendance for each are given herewith:

Clive	35
Manning	52
Beaverlodge	125

As in previous years the interest was high and students reported themselves as obtaining considerable benefit from attending these schools.

OLDS SCHOOL OF AGRICULTURE

The school is in its forty-second year of operation. The 1955 graduating class will be the fortieth class to leave the school since it opened, as there was no graduating class in 1920 on account of the flu epidemic. This year marked the end of an era at the school when Mr. M. W. Malyon, the last of a group of instructors who joined the staff in the early 1920's, left.

Deceased former staff members who gave long and devoted service to the Schools of Agriculture were honored at the summer Alumni Reunion. Pictures of Mr. W. J. Elliott, first principal of O.S.A., Mr. George Holeton, instructor in woodwork from 1913 to 1944 and Mr. A. T. Kemp, instructor in horticulture and field husbandry 1922 to 1947, were unveiled by Mr. F. S. Grisdale, Principal of O.S.A. from 1920-1929.

Graduation

The 1953-54 term closed on April 7th, 1954 with the presentation of fourteen diplomas in home economics and sixty-one in agriculture. Mr. O. S. Longman, Deputy Minister of Agriculture, delivered the address to the graduating class. Miss Julie Jacobsen, a second year home economics student from Tilley, Alberta, was valedictorian.

The school year was very satisfactory in most respects. Very few discipline problems arose and a good school spirit was in evidence at all times. While academic attainment was not high, it was greatly improved from the previous year and a constant effort was made to improve it still further.

A well rounded extra curricular program covering sports, social and literary activities was directed by the Students' Council under the presidency of Robert Winther of Huxley.

Winners of scholarships for distinction in various fields were named as follows:

United Grain Growers—Helen Fringer, DeWinton.
 Alberta Wheat Pool—Wilbur Collin, Warner.
 Canadian Legion—Irene Paxton, Innisfail.
 Alberta Women's Institute—Mona Brown, Falum.
 O.S.A. Alumni Association—Shirley Harrison, Lousana; Douglas Gibson, Innisfail.
 Imperial Oil—Ernest Stables, Altario.
 Alberta Hatching Egg Producers—Arthur Mattheis, Scapa.
 United Farmers of Alberta—David Shearer, Carmangay.
 Alberta Seed Growers Co-op—David Scott, Cochrane.
 Surplus Wheat Board Monies Trust—Viola Bartelen, Strathmore; Evelyn Fringer, DeWinton; John Rock, Drumheller; Donald Thomas, Indus.

In addition, prizes for proficiency in various fields were awarded to graduating students.

Special Lectures and Visitors

Lectures in irrigation were given by Mr. C. J. McAndrews, Irrigation Specialist; in animal sanitation by Dr. J. G. O'Donoghue, Veterinary Services Branch and in beekeeping by Mr. J. W. Edmunds, Supervisor of Apiary Inspection.

Special speakers included the following: Dr. A. G. McCalla, Dean of Agriculture, University of Alberta; Miss Mabel Patrick, Director, School of Home Economics, University of Alberta; Miss E. Nelson, Department of Extension, University of Alberta; Mr. F. H. Newcombe, Director, Extension Service; Mr. D. H. McCallum, Dairy Commissioner; Mr. J. Kokolsky, Fur Farm Supervisor; Mr. W. Lobay, Supervisor, Crop Protection; Mr. G. R. Sterling, Supervisor, Weed Control and Soil Conservation; Mr. F. J. Higginson, Acting Poultry Commissioner; Mr. C. A. Cheshire, Extension Agricultural Engineer; Mr. H. B. Stelfox, Experimental Station, Lacombe; Miss Margaret Fraser, Supervisor, Girls' Club Work; Miss C. Judson, Extension Home Designer; Miss J. F. Ferguson, Registrar-Consultant, School for Nursing Aides, Calgary; Mr. E. C. Bealing, Terrills Flowers Ltd., Calgary; Miss E. Clarke and Miss Jessie Stewart, National Employment Service, Calgary.

Special Events

February 18—Lecture by Mr. J. B. Early of Peace River.
 February 26-28—Visit of V.S.A to O.S.A.
 March 31—"Little Royal" and Achievement Day.
 April 7—Graduation.
 July 9—Summer Alumni Reunion.
 August 5—Luncheon for Ministers and Deputy Ministers of Agriculture from across Canada.
 November 26—Fall Alumni Reunion Dance.

Summer Activities of Staff

During the summer months when regular courses were not in session staff members were engaged in various duties connected

with the school and other branches of the Department. Mr. Malyon was in charge of grounds; Mr. Belanger in charge of maintenance; Mr. Jorgenson assisted with summer courses, revised the mathematics courses for the Schools of Agriculture and Home Economics, worked on publications for 4-H clubs and was Acting Principal at any time the Principal was absent; Mr. May worked with the Extension Branch until May when he left the service; H. J. Armstrong was attached to the Field Crops Branch in connection with pest and plant disease control; Mr. Cooper was attached to the Extension Branch in connection with agricultural fairs; Mr. Rogers worked with the Accounts Branch doing inventory work at the Vermilion School of Agriculture except for July and early August, when he assisted with 4-H Club Weeks at the three schools.

Group Visits

There were about fifty organized gatherings at the school during the year. These included short courses, conventions, conferences, alumni reunions, 4-H Club rallies, competitions and visits; picnics, and the annual "Little Royal" and achievement day. Total attendance at these gatherings was approximately 4,600, which is about 1,000 more than in 1953. In January O.S.A. Visitors' Day was inaugurated and was repeated in November. This event is intended to afford interested people an opportunity to see the school in normal operation. Weather was not favorable on either occasion so attendance was small.

An invitation to 4-H Clubs to visit at any time brought about three hundred young people to the school during January, February, November and December. Usually just one group is handled on one day. Groups are invited for a meal and are given an opportunity to see every phase of the school life that can be shown in one day. In addition the school is visited by many individuals during the year. A few conveniently placed picnic tables draw family groups and tourists to the grounds to lunch in the shade. Others come for information and still others to renew acquaintances.

Grounds

A very cool, wet season resulted in late blooming of flowers and shrubs but luxuriant grass growth. The lawn between the dormitory and main building was under repair during the summer. The road was eliminated and soil was put in to build it up and to improve other parts of the lawn. It will all be seeded down early in 1955. New curbing was put in on the outside of the drive in front of the dormitory. A flag pole was erected in the centre of the turn-around with curbing around it which will provide for a flower bed. The parking lot for students' cars as well as some of the campus roads were gravelled.

Buildings

A major improvement was complete renovation of the first floor rooms in the boys' dormitory. This included built-in double bunks equipped with inner spring mattresses, desks, drawers, bulletin boards and mirrors. Other improvements to buildings included repairing and redecorating most of the main building, remodelling the apartment, the sewing room and cooking laboratory, laying battleship linoleum in the hallways and on stairs of two floors of

the main building, redecorating the library and dining room and installation of lockers in the metals shop. Redecoration and minor repairs were carried out in other buildings.

Installation of an automatic bell system, connecting to the town water system as a safety measure, and an increase in the fire fighting equipment are also major improvements.

The purchase of new urns, a new steam kettle and a gas toaster has improved facilities in the kitchen. An old gas machine used to convert naphtha to gas for use in the science and cooking laboratories went out of use because the naphtha was no longer available and both laboratories were completely converted to propane.

Extensive alterations to electrical wiring and installations implemented a large number of recommendations made early in the year by the electrical inspector.

Plots

The plots produced sufficient potatoes and other vegetables to supply the dormitory. However, as a result of frost damage before digging, additional supplies of potatoes had to be purchased.

The plots also continue to be the source of foundation stock of the Olds variety of Creeping Red Fescue and provide classroom material for field husbandry and botany. Fescue seed was also produced for use on farm and grounds.

Cereal and forage tests were conducted in co-operation with the Experimental Station, Lacombe; a seed treatment test in co-operation with the Field Crops Branch; fertilizer tests on hay in co-operation with the Advisory Fertilizer Committee; crop testing plots in co-operation with the Searle Grain Company; potato variety tests in co-operation with the Provincial Horticultural Station at Brooks; and apple seedling tests in co-operation with the Experimental Station at Morden, Manitoba.

Seed grain increase plots were sown but no seed was harvested because of frost. Three new chicken runs were laid out in part of the plot area and one was seeded down to provide range for 1955.

The tree line along the north end of the plots was completed. This connects to the farm tree line and makes one mile and a half of trees altogether.

The Farm

The highlights of the year from a weather standpoint were a cold, wet April, May and June, with fine weather in July and wet weather again through August and September. August was the wettest month on record with 11.98 inches of rain recorded. However, fine weather during the last three months of the year alleviated to some degree the conditions created by the unfavorable summer. Seeding was latest on record; low areas were not seeded; summerfallow was left untouched for most of the summer; haying was difficult to impossible except for a part of July and again in September and October; harvest was delayed even after grain was ripe because of soft fields and the harvest was most difficult.

Production on the school farm was as follows: Oats—5,100 bushels, barley—2,086 bushels, ensilage—100 tons, hay—60 tons, green feed—20 tons, Fescue seed—500 lbs.

It is anticipated that these feed supplies will be adequate to carry the live stock through until the 1955 harvest except for barley, which will be about 1,000 bushels short.

In spite of the unfavorable summer, normal operations were completed. Ninety acres were summerfallowed, 25 acres were broken and 25 acres seeded to a grass legume mixture, an old fence was removed and a small area broken to straighten fields on the south place. Changing over from fields running up and down the slope to across the slope was started on the south place in 1952 and is now completed. The wet weather created some drainage problems which have not been completely solved.

A new Massey-Harris three-plow tractor was purchased during the year with an old Case being traded in; a twelve-foot Minneapolis-Moline swather, a John Deere manure spreader and a fork for the front end loader were also purchased.

The Holstein herd continued to supply most of the milk requirements of the dormitory. Twelve to fourteen cows were milked most of the year. The Holsteins were all bred artificially. Sixteen Shorthorn calves were raised. Sale of bulls and old or unsatisfactory animals resulted in no change in the size of the herd.

About 200 hogs were raised with a good demand for breeding stock. Most of the litters were Canadian Yorkshires crossed with Large English Whites. Results of this cross are promising. A few litters have been entered for Advanced Registry.

A poultry flock is carried through the winter to supply eggs to the dormitory and for class purposes.

Angus and Hereford steers were purchased in the fall to feed with some of the Shorthorns and be used for class purposes and butchered to supply meat to the dormitory. Eight lambs were also purchased for this purpose. Home grown hogs supply pork and classroom material.

Staff Changes

At the end of the 1953-54 term Mr. A. E. Cahoon and Mr. R. M. Gratz resigned, the former to return to his store and customs duties at Waterton and the later to his farm at Carstairs. Mr. R. H. Cooper was transferred to 4-H Club work at the end of September, while Mr. M. W. Malyon went on extended sick leave at that time. Mr. K. E. May returned to British Columbia early in August to take a position with the Department of Agriculture there. Miss H. V. Moseson left early in May on an extended trip to Sweden; Miss A. Kernaleguen joined the staff of the Red Deer Composite High School in August, Miss E. King left in August to assume a teaching position at Grande Prairie and Mrs. M. Head returned to full time homemaking.

Staff for the Fall Term

J. E. Birdsall, M.Sc.—Principal, Farm Management.
Miss Thelma Graham—Dean of Women, Dietitian, Employment Training
Miss Gwen Daley, B.Ed.—Clothing, Mathematics.
Miss Amelia Randle, B.Sc.—Foods and Mathematics.
Miss Mary Ellen MacFarlane, B.Sc.—Home Management, Handicrafts.
Miss Loretta McRae, R.N.—School Nurse, Home Nursing.
Howard J. Armstrong—Metalwork.
Harlow W. Sutherland, B.Sc.—Science.
Fred C. Jorgenson—English, Mathematics, Community Organization, Economics and Cooperation, Employment Training.

C. L. Belanger—Farm Buildings.
 E. E. Rogers—Dean of Men, Instructor in Recreation.
 Cameron Kirk, B.Sc.—Farm Mechanics
 G. W. Carter, B.Sc.—Field Husbandry, Entomology.
 Tom Rawson, B.Sc.—Live Stock.
 Dennis Ratcliff, B.Sc.—Dairying and Poultry.
 Frank Campbell, B.Sc.—Botany, Horticulture, Mathematics.
 Mrs. Laverne Ortwein—Typing.
 Mrs. Betty Brown—Librarian.

The 1954 Fall Term

School opening was delayed from October 19th to October 26th on account of delayed harvest. Registration in agriculture almost maintained the level of the previous year, with 114 students as compared to 118, while the registration in home economics increased from 35 to 43. A gratifying feature was the high percentage of students returning to take the second year course. The term proved to be the most satisfactory in recent years. A fine group of enthusiastic young people working with a capable and energetic staff made this possible.

Registration for Fall Term

	Home Economics		Agriculture	
	1953	1954	1953	1954
First Year	21	14	54	49
Second Year	8	16	31	34
Two-in-One	6	13	33	31
	<u>35</u>	<u>43</u>	<u>118</u>	<u>114</u>

VERMILION SCHOOL OF AGRICULTURE

The 1953-53 Term

Visitors who inspected the school and addressed students during the term included: Mr. E. H. Buckingham, Dr. J. H. Bigland, Mr. D. H. McCallum, Miss M. K. Fraser, Mr. C. L. Usher, all of the Provincial Department of Agriculture; Mr. J. Alex Edmison, Queen's University, Kingston; Dr. A. J. Cook, Dr. C. F. Bentley and Dr. A. G. McCalla, University of Alberta; Mr. A. C. Head, District Superintendent, Alberta Government Telephones; Mrs. Weeks, Woodward's Stores, Edmonton; Mrs. K. Lyons, Unemployment Insurance Commission, Edmonton; and Miss Betty Tomlinson, C.B.C. Commentator.

Special events of the school term included:

- January 9th—Masquerade party.
- January 16th, 23rd and 30th—Competitive "lit" programs.
- February 6th—Hockey Tournament; visit of Eastwood High School basketball team.
- February 13th—Boys' Valentine dance.
- February 20th—Visit of University Aggie basketball team; Play Nite, three one-act plays.
- February 26th to 28th—Visit by thirty-five students and staff members to Olds School of Agriculture; 4-H Club Leaders' Conference.
- March 4th—Public speaking contest.
- March 6th—"Gym" Night and House League basketball championship.
- March 12th—Alumni Reunion.
- March 20th—Operetta; visit of twenty-five 4-H Club members from Camrose.
- March 31st—"Little Royal" and Achievement Day.
- April 7th—Closing Exercises and Graduation.

The above outline indicates the scope and diversity of extra curricular activities which occupy a considerable part of the attention of staff members and provide a wide range of opportunity for social, literary, athletic and executive development of the students.

The continued interest and support by the public of all open functions at the school afforded considerable satisfaction to the staff. Increasingly large numbers of former students attend Alumni events. The "Little Royal" and achievement day again attracted well over one thousand persons. Dr. J. P. Bowland from the University of Alberta and Mr. J. M. Fontaine, District Agriculturists at Edmonton, were the guest judges.

Graduation

At the closing exercises held on April 7th, the principal address was delivered by Dr. N. H. Grace, Director of the Alberta Research Council. Mr. S. S. Graham, Supervisor of the District Agriculturist Service, represented the Department of Agriculture and Miss Eileen Jack was guest soloist.

Diplomas of graduation were awarded as follows:

	Agriculture	Home Economics
Two year course	39	9
Two-in-One Course	27	7
	66	16

Winners of scholarships for distinction in various fields were named as follows:

Vermilion Board of Trade—Calvin Ross, Forestburg.
 V.S.A. Alumni Association—Richard Friedrich, Morinville;
 Elinor Adam, S. Edmonton.
 Alberta Seed Growers' Co-operative—Denis Anderson, Bluffton.
 Craig Bros.—Donald Peterson, Ohaton.
 Imperial Oil Limited—Lenard Cunningham, Kelsey.
 Alberta Turkey Breeders—Thomas Bowzaylo, Athabasca.
 Alberta Women's Institutes—Gladys Svean, Rivercourse.
 Robert Gardiner Memorial—Bernice Koetke, Daysland.

The Alberta Surplus Wheat Board Monies Trust scholarship tenable at the University of Alberta was awarded to Miss Blanche Ross of Forestburg.

In addition to these scholarships, prizes donated by various business firms and organizations to a value in excess of \$400.00 were awarded to students for distinction in various branches of classroom activity.

Winners of the staff medals were:

Two-in-One Agriculture—Park Letts, Westlock.
 Two-in-One Home Economics—Helen Brown, Vimy.
 Second Year Home Economics—Blanche Ross, Forestburg.

The Summer Program

A series of short courses held in July was the principal feature of the summer program. These were as follows:

July 2nd—Alumni Reunion.
 July 4th to 10th—4-H Club Week.
 July 12th to 15th—Farm Women's Week.
 July 19th to 24th—Boys' and Girls' Fair Camp.

Additional special events included:

April 12th-14th—Inter-School staff conference on animal husbandry and mathematics.
 April 12th-14th—Farm Welding Short Course.
 March 1st—Beef Club meeting and demonstration.
 May 27th—Western Stock Growers' district meeting.
 June 16th—United Church Sunday School picnic.
 June 22nd—F.W.U.A. District Conference.
 June 23rd—Anglican Sunday School picnic.
 July 3rd—F.U.A. District Conference.
 July 16th—W.I. Constituency Conference.
 July 18th—Anglican Outdoor Church Service.
 July 26th-27th—Riley district 4-H Club Rally.
 July 29th—Wainwright-Vermilion 4-H Club Rally.
 August 14th—Cereal Crops Field Day.
 August 16th—V.L.A. Crops Field Day.
 October 7th and 8th—Inter-School staff conference.

The above outline indicates the extent to which numerous organizations have employed facilities of the school for meetings, demonstrations and field days.

Employment of Staff during the Summer

In addition to the responsibilities associated with the summer program and other events described above, members of the teaching staff engaged in various other activities connected with the school or other Branches of the Department.

The arrangement begun in 1953 whereby services of four instructors and the use of our classrooms were leased to the Vermilion School Division for instruction in shop work and home economics was continued.

A similar arrangement with the Town of Vermilion was made for the services of Mr. G. W. Tuck as Recreation Director for the summer months.

Buildings and Grounds

A normal program of maintenance and repair was conducted throughout the summer months with most of the work being done by the regular maintenance staff. Major projects included the re-modelling of seventeen dormitory rooms to provide built-in bunks and other furnishings. Rooms equipped in this manner are proving highly practical and popular. It is planned to continue this project in the ensuing year.

The School Farm

In spite of a late, cold spring and summer season reasonably good yields of good quality crops were harvested as follows:

	Wheat	Oats	Barley	Hay	Greenfeed	Fallow
Acres	11	75	40	70	18	76
Yields	260 bu.	3705 bu.	1588 bu.	104 tons	38 tons	..

Good yields of good quality vegetables in sufficient quantity to meet the dormitory requirements for potatoes, carrots, turnips and beets were harvested.

Principal replacements of farm equipment included a Ford tractor and a power mower.

The regular live stock program was continued, for which the following figures are provided:

Basic Herd	No. as of March 31, 1954	Sales, year ending March 31, 1954
Dairy cows	18	\$8,240.81
Dairy bulls	1	
Stocker cattle	13	1,980.82
Brood sows	7	3,964.31
Boars	1	
Breeding ewes	45	1,128.33
Rams	1	
Horses	7	
Laying hens	308	1,427.80

Total farm sales for the year amounted to \$14,984.95.

The 1954-55 Term

Classes were enrolled on October 26th as follows:

	Agriculture	Home Economics
First Year	49	20
Second Year	38	15
Two-in-One	28	8
	115	43

Of this number, three boys and three girls had withdrawn for personal reasons by the end of the fall term.

The school has enjoyed fine support from numerous business firms and organizations who have donated a very considerable quantity of material and equipment for teaching and demonstration purposes without which our work, particularly in farm mechanics and home management, would be considerably handicapped.

Special events of the fall term included:

November 12th—Election of Students' Council.

November 13th—Presentation of the Shakespearean play, "Romeo and Juliet", by the Lancaster Players.

November 18th—Entertainment by Frank Crawshaw.

November 19th—Alumni Reunion.

November 24th—The Fish and Game Association presentation of the Jim Bond Show.

Staff

N. N. Bentley, B.A., B.Sc.—Principal, Instructor in Farm Management
V. J. Janssen, B.Sc.—Farm Superintendent, Instructor in Animal Husbandry
J. Harcus, B.Sc., B.Ed.—Dean of Men's Residence, Instructor in Poultry and Dairying
Mrs. I. Collins—Dean of Women's Residence and Dietitian.
J. A. R. Palin, B.Sc.—Instructor in Farm Mechanics
K. M. Stone, B.Sc.—Instructor in Field Husbandry.
D. C. Folk—Instructor in Farm Building.
W. S. Baranyk, B.Sc.—Instructor in Horticulture and Botany.
E. Boyko—Instructor in English.
W. B. Olson—Maintenance Superintendent and Instructor in Metalwork
Mrs. M. E. Acheson—Instructress in Clothing.
Mrs. G. B. Perriam—Instructress in Home Management.
Miss Nellie Patson, M.Sc.—Instructress in Cooking and Nutrition.
L. G. Seath, B.Sc.—Instructor in Science.
W. G. Tuck, B.Ed.—Instructor in Mathematics and Recreation.
Miss K. Grossguth—Staff Stenographer, Instructress in Employment Training and Typewriting.
Miss A. McLaughlin, R.N.—School Nurse and Instructress in Home Nursing
Mrs. K. I. Bell—Secretary.
H. Cooper—Accountant.

FAIRVIEW SCHOOL OF AGRICULTURE

The 1953-54 Term

Graduation exercises were held April 7th. The Honourable L. C. Halmrast, Minister of Agriculture, addressed the graduands and later presented diplomas to members of the graduating class and scholarships to a number of the students. R. M. Putman, Superintendent of Schools of Agriculture, accompanied Mr. Halmrast and assisted in the awarding of student prizes for various accomplishments during the term.

Diplomas of graduation were awarded as follows:

	Agriculture	Home Economics
Two Year Course	26	5
Two-in-One Course	10	4
	36	9

The winners of scholarships for distinction in various phases of school work were named as follows:

W. P. Loggie, Fairview—Gordon Gilkyson, La Glace; Elsie Walker, Salt Prairie.

Alberta Seed Growers—Stanley Shulhan, Cherhill.

Imperial Oil Company—Bryce Robinson, La Glace.

Alberta Women's Institutes—Edith Letendre, Grovedale.

Robert Gardiner Memorial—Rudolph Lubeseder, Praire Echo.

F.S.A.—Alumni Association—Betty Lund, Clear Prairie.

Alberta Hatching Egg Producers—John Martin, Montney, British Columbia.

Surplus Wheat Board Monies Trust (to University of Alberta)—Walter Gerdts, Bluffton.

Winners of staff pins were:

Ewart Loucks, Two River, British Columbia.

Ethel White, Rio Grande.

Businessmen of Fairview and outside organizations were generous in their support of the school prize list. In addition to the above scholarships, \$305.00 in prizes was awarded to students for outstanding work in the various courses.

Visitors and Special Speakers

Among the visitors and special speakers at the school during the year were the following: Miss J. F. Ferguson, Director of Nurse Recruitment, Department of Health; Mr. E. Berg, Consolidated Mining and Smelting Company, Calgary; Mr. Solon Low, M.P.; Mr. W. F. Gilliland, M.L.A.; Mr. Donald Cameron, Director of Extension, University of Alberta; Mr. J. P. Mitchell, Supervisor of Industrial Arts, and Miss Beatrice MacFarlane, Supervisor of Home Economics, Department of Education; Miss B. Mitchell, Mr. A. W. Beattie and Mr. P. Holt, Department of Agriculture, Berwyn; Mr. W. Thompson, Citizenship and Immigration Branch, Grande Prairie; Mr. E. C. Stacey, Superintendent, Experimental Station, Beaverlodge; Miss Joyce Lewis, Extension Nutritionist; Hon Ivan Casey, Minister of Lands and Forests; Mr. W. H. Grant and Mr. Hacker, Department of Education, British Columbia.

Other Department of Agriculture representatives visited the school during the year in the course of their regular duties.

Calendar of School Events

Some of the outstanding school events were:

- January 16th—Masquerade dance.
- January 23rd—Second Literary program.
- January 30th—Frontier Night.
- February 20th—Play Night.
- March 5th—Spring Open Dance.
- March 13th—Gym Night.
- March 31st—"Little Royal" and Achievement Day.
- April 7th—Graduation and Closing Exercises.

The "Little Royal" and achievement day program again proved to be very popular. Between six and seven hundred visitors were present to witness the showmanship classes for live stock and the exhibits of class projects and course work on display throughout various classrooms and laboratories. Mr. W. H. T. Mead, Live Stock Commissioner, was guest judge and complimented Mr. G. Ogston and Mr. D. R. Macpherson of the school staff on the high quality of showmanship displayed by the students in the judging ring.

Extra curricular activities play a large and important part in the life of students at any residential school. Under staff supervision the students' council organized and carried out a very full program of sports, social events and literary projects. Mr. H. F. Irwin, Instructor in English, was responsible for the very successful production of the second edition of the school year book, "The Aurora".

Summer Program

The summer program included regular short courses as follows:

	Attendance
July 16th—Alberta Women's Institute Conference	80
July 19th to 25th—4-H Club and Rural Youth Week	89
July 26th to 29th—Farm Women's Week	33

In addition, the following groups were accommodated at the school:

	Attendance
February 13th—Battle River Junior Beef Club	27
April 9th to 15th—Civil Defence School	31
April 12th to 15th—Farmers' Farm Building Short Course	11
June 17th—Peace River Junior Club Leaders' Conference	16
June 25th—Dairy Field Day	50
July 12th—Weed Inspectors' Conference	22
August 23rd to 27th—Hospital Accountants Course	16
October 7th—R.C.A.F. Band	40
October 9th to 11th—Anglican Young People's Conference	28
October 14th and 15th—North Peace and High Prairie Teacher Convention	220

On an experimental basis the teachers of the High Prairie School Division were included in the North Peace Convention. While facilities were taxed to the limit, general satisfaction was expressed with the result.

Each year there has been an increase in the number of organizations desirous of using the school for conferences and courses of one kind and another. Provided the group can demonstrate that it represents a fairly large section of the Peace River area, every effort is made to accommodate them outside of the regular school term.

Employment of Staff during the Summer

Leave of absence was granted to V. W. Osbaldeston for the purpose of attending summer school at the University of Alberta. Leave of absence was also given to Miss E. M. Sanford and Miss O. M. Gerrard of the teaching staff.

H. F. Irwin transferred to the Field Crops Branch as weed supervisor for the Peace River area. W. R. Knight, Maintenance Foreman, supervised construction for the Department of Public Works in addition to his regular duties. D. R. Macpherson and G. A. Ogston were engaged in the operation and further planning of the school farm as manager and farm foreman respectively, as well as doing live stock judging at some of the local fairs throughout the area. Mr. Macpherson also gave assistance to G. W. Shewchuk, District Agriculturist at Spirit River. J. H. Warne was inspector and fieldman for the Poultry and Dairy Branches for the Peace River area. J. T. Lancaster returned to operate his farm at Bluesky. Miss G. M. Graham resigned at the end of the term to be married. F. W. P. Bockman transferred to the Department of Lands and Forests. C. E. Paquin assumed full time duties with the Department of Lands and Forests. Mrs. L. A. McDougall resigned at the close of the term due to ill health. D. G. Norris was hired as school accountant replacing P. Shankowski, who was transferred to head office.

For the period September 1st to October 15th, V. W. Osbaldeston and Miss O. M. Gerrard taught shop and home economics options respectively to intermediate and high school students from the Fairview School Division. This was in accordance with an agreement reached between the School Division and the Department of Agriculture. The total number of boys taking advantage of the shop option was 65, and 70 girls made up the various classes in home economics. The same arrangement will prevail from April 15th to June 30th.

Buildings and Grounds

The two staff houses begun during the fall of 1953 were completed in 1954 and are being occupied by teaching staff. A moderate amount of gravel was applied to all roads on the grounds and a concrete walk was laid from the back of the school building to the live stock pavilion. The maintenance staff completed very satisfactorily the gymnasium stage which had been roughed in by students as a class project the previous term. Approximately two miles of fencing was completed on the school farm. As a class project the senior students built a rink house for the school rink. Numerous maintenance jobs were completed, and general building maintenance was performed to keep the facilities in excellent condition.

Good progress was made on the grounds. All areas to be seeded to grass are either ready for seeding or have already been seeded. This includes the property surrounding the three staff residences in the town. Approximately one and a quarter miles of field shelterbelts were planted and about the same length of planting summer fallowed for planting in 1955. Incidentally, cuttings set out in 1951 now shown eight to ten feet of growth. Plans for a three rotation plot for dormitory vegetable garden and small recreation area south of the school are nearly completed and most

of the preliminary ground work has been done. Trees and shrubs on the campus have done very well with the exception of partial winter killing on the American Elm. Bedding out plants did very well after a late start.

The School Farm

Crops were somewhat poorer than in 1953 due to the cool growing season. No grain was threshed as it was felt that feed grain could be purchased more easily than good quality hay. While some difficulty was experienced due to the wet haying season, losses were not great. About 75 tons of hay and greenfeed were harvested. About 70 acres were seeded down to a legume grass mixture and a good stand appears to have been obtained. About 550 bushels of oats and 150 bushels of wheat were purchased for feed. In 1955 the first field seeded down in 1950 will be broken up.

Pasture was more plentiful in 1954 than in any previous year. The cattle came through the grazing season in very good condition. Demand for Aberdeen Angus breeding stock is still rather slow in this area. Seven bulls, four cows and four heifers were sold for breeding purposes during the year.

No Holstein breeding stock has been sold but interest and inquiries seem to be on the increase. The dairy herd now consists of twelve cows and heifers and five heifers will be available for breeding in the summer of 1955. Some of the older cows will soon be due for replacement but there should be some surplus stock for sale shortly. Milk production has increased considerably in the past year and supplies have been sufficient for the dormitory.

Egg sales were approximately 1,450 dozen with the bulk of these also going to the dormitory.

There has been a brisk demand for swine breeding stock. Nine boars and eleven gilts were sold and more could have been had they been available. One sow, Olds 20F, qualified for Advanced Registry with a litter of fourteen weaned and a carcass score of 89.

The 1954-55 Term

The fourth year of operation of the school witnessed a marked reduction in enrolment of boys. Indications are that the deciding factor in a number of cases was shortage of available funds due to adverse crop conditions generally and to marketing of wheat in particular. It is significant to note that more inquiries were received during the summer regarding courses offered and more calendars and announcements were sent out than in any previous year. While there were considerably fewer boys registered for the first year course in agriculture (12 as compared with 26), there was a small increase in the total registration of girls (21 as compared with 19). The yearly increase in the number of girls attending the school has been small but so far consistent. Three students were in attendance from the British Columbia Block.

Students registered in October 19th and registration was virtually complete within four days. Class enrolment was as follows:

	Agriculture	Home Economics	Total
First Year	12	13	25
Second Year	18	7	25
Two-in-One	4	1	5
	34	21	55

All fully eligible applicants were accepted.

As indicated by enrolment figures, there was a marked decrease in the registration of boys, particularly in the first year course. Judging from correspondence with the parents of prospective students and from contacts with farmers throughout the area, lack of available funds would appear to be the reason. Based on observation and discussion with those in a position to know, the writer believes there are many marginal farmers financially speaking, most of whom are just getting established. This group reacts very quickly to any suggestion of adverse financial conditions. A program of student enlistment for the coming term is planned and with more normal grain marketing conditions in prospect it is probable that a larger registration will be realized.

Instruction and administration staff was as follows:

J. E. Hawker—Principal, Instructor in Community Organization and Public Speaking.
 D. R. Macpherson—Farm Manager, Instructor in Animal Husbandry.
 B. J. Godwin—Dean of Men, Instructor in Horticulture, Botany and Physical Education.
 V. W. Osbaldeston—Instructor in Farm Motors and Farm Machinery.
 W. R. Knight—Chief Caretaker and Instructor in Farm Buildings.
 D. O. Low—Instructor in Science.
 H. F. Irwin—Instructor in English, Mathematics, Entomology, and Economics and Cooperation.
 J. T. Lancaster—Instructor in Field Husbandry and Farm Management.
 J. H. Warne—Instructor in Dairying and Poultry.
 G. A. Ogston—Farm Foreman and Assistant Instructor in Animal Husbandry.
 F. H. Klappstein—Instructor in Metalwork.
 Miss H. M. Smith—Dietitian, Dean of Women, Instructress in Employment Training.
 Miss E. M. Sanford—Instructress in Sewing, Handicrafts, Textiles and Home Management.
 Miss O. M. Gerrard—Instructress in Cooking and Nutrition.
 Mrs. F. E. Low—School Nurse and Instructress in Home Nursing and Laundering.
 D. G. Norris—Accountant.
 Miss D. M. Hoel—Secretary and Instructress in Typing.
 Mrs. E. M. Rae—Librarian.

4-H Clubs

G. S. BLACK, Supervisor, 4-H Clubs
C. L. Usher, Assistant Supervisor, 4-H Clubs
Priscilla Mewha, Assistant Supervisor, 4-H Clubs
David Stelfox, Regional Supervisor of 4-H Clubs
Dorothy Olsen, Junior Supervisor, 4-H Clubs

General

The past year has again shown an increase in membership and in the number of clubs organized. The expansion of club activities is also noted, all of which has increased the work at Headquarters necessitating the securing of additional personnel. The mid-summer club leaders' conference was discontinued and plans made to hold two conferences, namely early spring and late fall which would be just prior to the starting of the club project. Such a conference was held in April but adverse weather prevented the fall one being held.

4-H Club Week at the Schools of Agriculture continues to be a major event. Over five hundred boys and girls are now eligible to attend this event as guests of the Department of Agriculture and the various sponsoring organizations. The program of work, sports and social activities gives each member, to say the least, a very busy and interesting week. Appreciation must be given to sponsoring organizations, members of other branches of the Department of Agriculture and to individuals who have assisted in this work.

Interest continues in the Provincial Plot Competition and despite a very adverse season, the plots on the whole were very good.

Alberta again made a good showing at the National 4-H Contests having to its credit one first and three seconds, a third, a fourth and a sixth award. Alberta 4-H grain club members made an excellent showing, having 25 out of the 27 prize winning samples in wheat as well as first in barley.

The livestock members had a very successful year. The quality of exhibits at most fairs was very good and prices satisfactory. Dairy calf clubs remain about the same with keen interest being shown in the provincial show held at Red Deer. Poultry clubs are few in number but report a successful year and swine clubs have again entered into 4-H work with five new clubs.

Alberta again selected a very fine representative for the T. Eaton Scholarship—Robert Plank of Bluffton. Although not successful in winning this award, we are indeed proud of the calibre of young men being selected annually.

Miss Margaret K. Fraser resigned in November after serving 13 years with the Department and was responsible in a great measure for the girls' clubs reaching their present membership. Miss Priscilla Mewha, formerly District Home Economist at Edmonton, was appointed Assistant Supervisor and Miss Dorothy Olsen was taken on the staff as Junior Supervisor on June 1st.

Mr. C. L. Usher has worked hard as my assistant and so has David Stelfox, Regional Supervisor at Camrose. We also appreciate the temporary assistance of R. H. Cooper who is presently editing study material for club members in the live stock projects.

ALBERTA'S 4-H CLUBS, 1954

	No. of Clubs	Membership
Beef	132	2,396
Dairy	27	434
Poultry	7	121
Sheep	2	24
Swine	5	70
Wheat	76	1,294
Oats	30	439
Barley	46	731
Forage	6	96
Potato	2	30
Clothing	88	1,123
Foods	32	414
Gardening	71	804
Etiquette	1	13
Home Decorating	2	28
Total	527	8,017

Leaders' Courses

One provincial and sixteen regional leaders' courses were held. Regional one day leaders' courses were held at Spirit River, Berwyn, Camrose, Leduc, Wetaskiwin, Red Deer, Stettler, Drumheller, Calgary, Brooks, Medicine Hat, Lethbridge, Ryley, Willingdon, Vermilion and Edmonton.

One provincial leaders' course was held at Olds which included the projects which start in the spring of the year, namely garden and grain. This course was very well attended.

4-H Club Week

4-H Club Week was held at Vermilion, Olds and Fairview Schools of Agriculture during the second, third and fourth weeks of July. Each 4-H club is entitled to send one member who has won this award by their work in the previous year. Four hundred and eighty-four members were eligible to attend in 1954.

At each of the Schools of Agriculture scholarships entitling the members to attend the regular course in agriculture or home economics and which are valued at \$75.00 each were awarded.

Eighteen scholarship were awarded as follows:

Olds:

Home Economics: Viola Bartelan, Strathmore; Ella J. Carruthers, Fort Macleod.

Grain: Douglas Thomas, Indus; Victor G. Grose, Clive.

Livestock: Robert Lougheed, R.R. 3, Red Deer; Graham Gall, Acme.

Vermilion:

Home Economics: Ilene MacDonald, Mannville; Victoria Lopushinsky, Star.

Grain: Otto Itterman, Warburg; Waldemar Rimer, Warburg.

Livestock: George Gow, Vermilion; Harry Pederson, R.R. 1, St. Albert.

Fairview:

Home Economics: Patsy Carty, Beaverlodge; Nina Cuira, Eaglesham.

Grain: Beverly Van Schaick, Wembely; Kenneth Evans, High Prairie.

Livestock: Edwin Walisser, Manning; Gordon Gilkyson, La Glace.

International Trips

4-H club members for the eighth consecutive year were again selected to represent Alberta at the 4-H Club Congress at Bozeman, Montana. This is an exchange whereby a similar group from the State of Montana are guests of the Department of Agriculture at one of the Schools of Agriculture. The Calgary Exhibition Board again assisted by having the Montana group attend the Calgary Exhibition as their guests for one day.

The following composed the group which went to Montana this year, accompanied by H. H. Michael, District Agriculturist at Claresholm, and Miss E. M. Bartman, District Home Economist at Lethbridge: David Kenny, Redlands; Del Bates, Acme; Louise Gibson, Bow Island; Shirley Hemsing, Rolling Hills.

Provincial Judging Competitions

Selection of the teams to represent Alberta at the National Contests were again held at the Olds School of Agriculture. The contest was very keen and resulted in the following teams being selected:

Clothing—Helen Fringer and Evelyn Fringer, De Winton.
Food—Joan Leslie and Mavis Scott, Mossleigh.
Garden—Dorothy Lindmark and Evelyn Cole, Brownfield.
Grain—Tony Schlachter and Clarence Roth, Bow Island.
Beef—Douglas Fraser and Melvin Prowse, Cluny.
Dairy—Norman Vig and John Ree, Bentley.
Poultry—Mae Kamps and Tetsy Reitsma, Lacombe.

Teams which stand second in their project are awarded a scholarship entitling them to attend Club Week at one of the Schools of Agriculture the following July. The following members are entitled to these awards:

Clothing—Anna Sebzda and Annie Luszczewski, St. Albert.
Food—Mary and Margaret Vrbicky, Patricia.
Garden—Sybil Groom and Sylvia Reed, Ponoka.
Grain—Dennis Lindberg and Robert N. Plank, Bluffton.
Beef—Peter Brown and Doris Ferguson, Tofield.
Dairy—Betty and Lawrence Hurum, Holden.
Poultry—Walter Haustein and Alfred Zurfluh, Erskine.

At the National Contests, Alberta teams stood first in Food; second in Dairy, Grain and Clothing; third in Garden; fourth in Beef; and sixth in Poultry.

Camps, Rallies and Short Courses

Camps were held at the Edmonton Exhibition and the Lethbridge, Vegreville, Vermilion and Camrose "B" class fairs. Camps were also held at Elkwater Lake south of Medicine Hat and at Bar Harbor Lake near Stettler. In every case capacity attendance was noted and thoroughly enjoyed by all.

Schools of Agriculture, experimental farms and outstanding farms are the scenes of 4-H club tours each summer. There is much to be commended the visiting of such places which is both entertaining and instructive.

In some areas rallies are becoming fairly popular. Rallies are joint meetings of clubs, often as many as four or five clubs attending. Demonstrations of club work, musical items, etc., are part of the program carried out by the club members.

Pins, Crests and Uniforms

Interest continues to expand in the securing of uniforms, pins and crests by members. 4-H gate signs, plot posters and 4-H flags are observed on many members' farms and at their local achievement days.

Thematic Displays

Considerable interest is being shown in club thematic displays. Both Edmonton and Calgary Exhibitions have excellent 4-H club exhibits. The winning exhibits at these fairs are in turn shown at Regina in a western inter-provincial contest. National Grain Company is sponsoring these contests and much interest is being created. Some of the class "B" fairs, notably Camrose and Lethbridge, have excellent displays. Grain club achievement days in many cases show interesting thematic displays, especially at the larger achievement days where three to five grain clubs exhibit.

4-H Club Film

The Alberta club film has had a very busy year since its arrival late in February last year. No less than seven films are available and the demand continues to increase, resulting in an additional copy being purchased. This film has been shown at National Club Week and in Newfoundland and requests to purchase a copy have been received from the Province of Saskatchewan.

Alberta Club News

The club magazine published quarterly continues to fill a club need. It is strictly a club magazine devoted to club events, results of competitions and club activities within the province. Eight thousand copies are printed, enabling each member and other interested parties to receive copies. A series of illustrated short articles on officials connected with the 4-H movement is one of the highlights of the magazine.

BOYS' AND GIRLS' CLUBS—1949-54

	Total of Grain Clubs	Total Members	Total of Live- stock Clubs	Total Members	Home Economics Clubs	Prov. Member- ship	Dom. Member- ship
1949	110	1,903	108	2,373	125-1,660	5,636	50,241
1950	132	2,247	113	1,965	137-1,747	5,959	54,081
1951	151	2,440	118	2,094	150-2,041	6,575	57,816
1952	157	2,304	133	2,213	167-1,577	6,294	58,706
1953	167	2,743	148	2,536	169-2,177	7,456	65,215
1954	160	2,590	173	3,045	194-2,382	8,017	68,713

ALBERTA 4-H CLUBS (1944 to 1954 inclusive)

Project	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954
Swine	12	7	1	3	2	1	2	2			5
Beef	42	47	56	73	88	81	83	89	100	115	132
Dairy	11	15	14	18	25	25	26	23	22	25	27
Poultry			2	3	1	1	2	4	10	7	7
Sheep									1	1	2
Wheat	19	21	34	42	38	50	66	70	61	68	76
Oats	26	19	24	17	22	26	29	40	37	33	30
Barley	26	15	16	26	28	22	20	27	45	53	46
Potato	3	2	8	2		1	1	2	1		2
Forage	19	14	10	15	13	11	16	12	13	13	6
Garden	11	20	27	30	37	39	47	52	59	65	71
Clothing	44	60	61	52	71	74	72	87	87	78	88
Foods	1	2	3	4	2	8	16	12	13	21	32
Home Decoration	11	5	2	4		4	4	4	8	2	2
Etiquette								2		3	1

AGRICULTURAL PROJECTS

Beef Calf Clubs

This project having the most glamour continues to be the most popular type and again has had a most successful year. Public support has been excellent and prices paid at the club sales have been good.

Achievement days, combined with the club sale in which three to eight clubs combine, continue to be the outstanding agricultural event of the year in many areas. As many as five hundred people attended such events.

Assistance is very much appreciated and special thanks given to members of the live stock branch, business firms, service clubs and so many private individuals who have assisted in making the 4-H beef project of real value to the club member.

Dairy Calf Clubs

Dairy calf clubs continue to operate in about the same number each year. These clubs are operating in areas suitable for dairying and the clubs are assisting the youth in very many districts. Members exhibit calves, yearlings and two year olds and although lacking the glamour of a sale, in turn is establishing good herds of dairy animals in each club area. The educational program of all of the 4-H club projects in turn insures excellent training in citizenship in in the phase of agriculture belonging to the project.

The most efficient dairy calf club last year was the Bearspaw Dairy Calf Club west of Calgary who were awarded the South Edmonton Kiwanis shield.

The Provincial Junior Dairy Show was again held at Red Deer—a very excellent showing of both calf and yearling calves was on display. Two members of the South Edmonton 4-H Calf Club won first prize for the calf and yearling, namely R. Stannard and Carol Toane.

The Alberta Dairymen's Association again invited one member from each of the 4-H calf clubs north of Red Deer to be their guests at the Dairymen's Convention and royally entertained the visiting guests.

Special awards for showmanship were also granted to the top two members in each club.

Poultry Clubs

Although comparatively few poultry clubs are in operation, they are very popular in the areas where they are organized.

Crop Clubs

Crop clubs report only a fairly successful year; weather conditions were on the whole very bad, a late spring delayed seed-ing; continued wet weather being followed by severe frost during the middle of September ruined the germination of very many seed plots.

The Provincial Plot Competition continues to assist in improving plots across the province in the grain projects. The best plot of

wheat, oats and barley in each District Agriculturist's area was judged by Mr. L. Usher and the following awards made:

Wheat—Allan Marshal, Acadia Valley.

Oats—Stanley Howrish, Holden.

Barley—Ronald Laycraft, High River.

Sponsoring organizations presented wrist watches to the winners, who also received a silver tea tray from the Department of Agriculture.

Royal Winter Fair

Alberta 4-H members again made a splendid showing in the grain classes at Toronto. Twenty-five awards were won out of a possible twenty-seven. Ronald Leonhardt again stood first in his class and went on to win the championship in spring wheat classes. However, a winter wheat sample from Ontario was awarded the grand championship. Alberta is also proud of H. Delfs of Woking who won first in the barley class.

HOME ECONOMICS PROJECTS

Through home economics projects instruction in homemaking is being provided to a large number of girls in rural areas of Alberta. There were 194 clubs carrying projects in 1954 with a membership of 2,482.

The interest in this work is increasing rapidly and the standard of work being done by club members is improving greatly. This year many of the club leaders and assistant leaders are former club members and many are graduates of one of the Schools of Agriculture.

Projects

No new projects have been outlined this year as the twelve now in use seem satisfactory to date. Clothing projects are still the most popular with club members, with 88 clubs enrolled. Food projects have increased greatly this year with 32 as compared to 21 last year. There were 71 garden projects sponsored jointly by the Department of Agriculture and the Alberta Wheat Pool.

Besides the instruction available from project books, 477 lectures in home economics and club work were given by members of the home economics staff and 80 by the Girls' Club Supervisor and the Assistant. 176 achievement days were held with 10,452 people attending. These single or joint club achievement days were attended and judged by the District Home Economists or the Assistant Supervisor.

The assistance in preparing and carrying out the projects in food given by Miss B. Joyce Lewis was greatly appreciated.

Awards

All garden club plots were judged by the District Home Economist with assistance from the District Agriculturists or Alberta Wheat Pool fieldmen. The Alberta Wheat Pool awarded 68 prizes for the best garden plot in each club and presented 12 clubs with awards for obtaining the highest standing in each District Home Economist district. These last were in the form of a book to be added to the club library. A book on flower arrangements was presented this year.

The T. Eaton Co. again presented pinking shears or timers to a winner in each food, clothing and home decoration club. The selection for the award was based on the club record. Ninety awards were made in clothing and home decoration and thirty-two in food.

The Alberta Wheat Pool scholarships of \$200.00 each to students in first, second and third year home economics at the University of Alberta were awarded to:

Anne Ziemmer, Blackfalds, first year.

Valleria Liss, Sangudo, second year.

Arlene Nelson, Veteran, third year.

Other Activities

A Garden Club Leaders' Course was held in April this year in conjunction with leaders from grain and other projects that started at that time. Much of the time of this course was spent on project work and this proved to be worthwhile as the club programs were generally better this year. Plans were made for another course for leaders of clubs starting in the fall but this was cancelled due to weather conditions.

Fifty-three leaders, meetings on a district or regional basis were held. Many of these were with leaders of the agriculture projects. These were very well attended, particularly in places where they had been held before and where leaders knew what help they would gain.

Teams were sent to National Club Week in Toronto representing food, clothing and gardening projects. They were:

Food	 Joan Leslie, Mossleigh Mavis Scott, Mossleigh	Placed first in National Competitions
Clothing	Helen Fringer, DeWinton Evelyn Fringer, DeWinton	Placed second in National Competians
Gardening	Eveleyn Cole, Brownfield Dorothy Lindmark, Brownfield	Placed third in National Competitions

Many club events were held this year. Twenty-four rallies, 60 tours and 11 short courses were scheduled. A number of 4-H members also attended the four fair camps where instruction was given by this staff and the District Home Economists. Eight 4-H camps were also held. At all of these events instruction was given to assist in project work. 367 people attended these events.

Aims

The big problem in club work is to train and maintain good leaders. This problem is being met by:

1. Leaders' courses on a provincial, regional and district basis.
2. Short courses and camps where older club members can be given instruction in leadership and project work.
3. Junior leaders. There are a number of these enrolled this year. Great interest was shown at club weeks in this work and special classes were given on leadership to those members who were interested and old enough to use the information.

The aim of girls' club work is to train girls to be better citizens, to encourage them to use-up-to-date methods in homemaking and to interest them in improving their standard of work. Displays at achievement days, reports of District Home Economists, results of

judging competitions and the number of girls attending University indicate that, to some measure at least, these aims are being met.

In addition to this the following work was done by the Girls' Club Supervisor this year:

	Number	Attendance
Meetings attended	54	3,262
Short courses and field days	65	9,021
Conventions and fairs	18	
Camps	3	
Radio talks	14	
Letters written	2,392	
'Phone calls	968	
Office interviews	324	
Home visits	73	

Report of the Radio and Information Branch

E. R. McCRIMMON, Supervisor

E. B. Swindlehurst, Research Information Editor

S. B. Wilton, Commentator-Writer

Miss M. Sears, Secretary-Writer

GENERAL

Through the medium of press and radio this branch is engaged in presenting information to the rural people of Alberta. Since the commencement of activities in April 1953, members of the branch have enjoyed a very pleasant association with staff members of the Alberta and Canada Departments of Agriculture, the University of Alberta, farm people in many districts of Alberta, and others associated with the agricultural industry. Many of these people have spent much time and effort assisting in the preparation of radio broadcasts and agricultural releases and their help is hereby acknowledged.

During the year two excellent features on the work of the Branch were published. One appeared in a national farm magazine and the other in the publication, "Within Our Borders".

Radio Productions

"Call of the Land" was aired 260 times during the year. The program, 10 minutes in duration, was carried on 6 radio stations at the following times:

CFGP, Grande Prairie	12.00 noon	CKRD, Red Deer	12:45 p.m.
CFRN, Edmonton	12:05 p.m.	CFCN, Calgary	1:00 p.m.
CKUA, Edmonton	12:30 p.m.	CHAT, Medicine Hat	1:05 p.m.

Every effort has been made to obtain the most suitable noon hour time. To this end changes were made as more desirable time became available at two of the stations. Requests have been made at several of the stations for more suitable time should time become available.

CKUA continued to record the programs and handle distribution. Tape recorders maintained by the Branch were used at Headquarters and in the field for recording interviews. The portable recorder is a valuable asset in obtaining recordings where background noise adds to the reality of actuality broadcasts.

Listener Response

A listener survey was conducted through 41 District Agriculturist and 14 District Home Economist offices in February. The results were encouraging. From figures collected it is estimated that the program is heard in over 10,000 farm homes each day. The program rating was established at 12.4%. This represents the percentage of radio listeners who hear the program daily. For an information type broadcast this is considered to be good. Greatest response was obtained in the Peace River area, around Red Deer, and at Medicine Hat. In the Edmonton area long established farm programs are strong competitors for listeners.

At Calgary broadcast time was 1:15 p.m. at the time the survey was conducted and audience response was accordingly low. Since February a more favorable time has been obtained and it is anticipated listenership will have increased.

Audience in 10 District Agriculturist districts was very low due to the fact that radio stations carrying "Call of the Land" are difficult to hear at those points. The general conclusion taken from the survey was that "Call of the Land" has built up a good audience for an information type broadcast which has been aired less than 2 years.

Letters continued to be received by officials interviewed requesting information in addition to what was carried on the air. In one instance upwards of 25 applications were received following an announcement concerning shelterbelt trees. These letters specifically referred to the radio announcement.

Programming

Material was gathered from a wide area of the province. While all areas could not be covered during the year effort was made to visit as many districts as possible. Poor summer weather interfered with plans for some of the field trips.

A general trend has been to use shorter interviews so that several topics could be carried on one program. More programs were aired using short agricultural news items and announcements than was the case the previous year. This gives wider variety and consequently should appeal to a greater section of the farm audience. The following table shows the material used during the year.

Nature of Material	No. of Programs
Field Crops (including weeds, pest control, horticulture, etc.)	60
Livestock and Veterinary Science	36
Farm Mechanics	11
Dairy	14
4-H Clubs	14
Schools of Agriculture	7
Poultry	7
Beekeeping	4
Home Economics	3
Miscellaneous (topics other than those above and programs carrying several topics)	104
Total	260

During the year special reports originated from the Alberta Dairymen's Convention, Western Stock Growers' Convention, National 4-H Council Meetings, the Calgary Exhibition and Stampede and the Edmonton Exhibition. In the case of the summer fairs agricultural highlights were carried daily for local audiences. Several reports were sent to the other stations. During the year 9 programs featured agriculture in other countries. Interviews were recorded with visitors from England, Pakistan, Venezuela, Guatemala, New Zealand, and Trinidad. Ceylon and Pakistan were described by scientists returning to Alberta from those countries.

Several special programs were carried on special holidays. As of December 31, 1954, this Branch has produced 458 continuous daily farm programs.

Interviews

The interview technique was frequently used. Interviews were obtained from these sources:

Source of Interview	No. of Appearances
Alberta Department of Agriculture	68
Canada Department of Agriculture	27
University of Alberta	15
Farm People (Including 4-H members)	33
Others	23
Total	166

Research Information

Contact was maintained during the year with the University of Alberta, the Science Service Laboratories at Lethbridge and Edmonton, and the Experimental Stations at Lethbridge, Vauxhall, Lacombe, Beaverlodge, and Fort Vermilion. Periodic visits were made and various phases of agricultural research discussed with the staffs of these institutions. As a result, 85 releases of "Science and the Land" were issued and information on a variety of topics made available.

A constant endeavour is made to keep this material as readable as possible with a view to saving valuable time for the reader and presenting the information in a readily assimilable form. Intelligent interest is seldom confined solely to results of experiment. Some knowledge of the objectives of research and of progress made in the various studies is often desirable. For that reason, research objectives, progress and results have all found a place in the various issues of our research information release.

The spirit of helpfulness and co-operation at all centres visited has been keenly appreciated. Research men in the various fields have been ready at all times to discuss their work and to place at the disposal of the research, information editor reports, theses, and other relevant material.

Farm Notes

This weekly publication is edited by the Secretary-Writer and features short news items and stories on various Agriculture and Home Economics topics.

Fifty-three issues were prepared during the year carrying 217 items. The subjects covered were as follows:

Field Crops	77
Livestock and Veterinary Science	24
Farm Mechanics	14
Dairy	23
Poultry	10
Beekeeping	8
Fur Farms	2
Home Economics	50
Others	9
Total	217

Distribution is made to the press, radio, staff members, libraries, and commercial companies associated with agriculture. The mailing list stood at 750 at the year's end.

Farm papers, dailies and radio stations frequently use this material. Checks made during the year indicate frequent use of the items by numerous papers.

Report of the Provincial Horticultural Station Brooks, Alberta

P. D. HARGRAVE, Superintendent

It is a pleasure to report that development of the Horticultural Station has made steady progress during the year. This annual report offers the opportunity to review the work of the Station in its various fields.

Station Administration and Development

Facilities—During 1954 consolidation and integration of, facilities, continued at the Station's new location.

Joining the staff during the year, Mr. D. A. Shaw, Assistant Superintendent, brought to the work at the station a technical background in horticulture. Mr. James Baird, one of the original staff, was the first to retire on pension since the Station's organization. Personnel are being trained and are taking over the specialized vegetable, potato, and tree fruit sections.

Improvements of a permanent nature included completion of a staff residence and of the main entrance gates, installation of concrete sidewalks about, as well as the setting of grade levels adjacent to, the main building. The latter operation will facilitate flood irrigation of the lawns and other plantings associated with the building site. A few larger evergreen trees were transplanted into permanent locations about the grounds in early spring. Approximately one-half mile of young pine and spruce were added to the present farm shelterbelt plantings. Additional gravelling of Station entrance roads and the work area to the rear of the main building was completed, along with placement of numerous culverts to facilitate proper drainage. A land levelling program plus the building of two extensive new fills on which lateral irrigation supply ditches can be run, has permitted elimination of an inefficient and lengthy lateral supply ditch. More efficient and uniform irrigation will now be possible of some 30 acres next to the southern boundary of the Station. Additional needed grain storage was obtained through re-building and enlarging an old portable shed, the new storage being of a permanent nature on a concrete foundation.

The lath house, used for propagation of shelterbelt trees and shrubs from seed, was doubled in size, permitting a larger volume of seedling trees to be produced. A small self-contained sprinkler system was obtained, which enables closer control to be had of soil moisture in the lath house, especially at times when the main field sprinkler is busy on other jobs. Capacity of the field sprinkler equipment has been increased by a third, thus expanding its usefulness and flexibility.

Six major pieces of machinery were added to Station equipment, a hydraulically operated tractor-mounted loader and dozer attachment, a Holland two-row transplanter, a trailer type weed and insecticide sprayer, a tree-digging machine built in the Station shop, an Allis-Chalmers All-Crop harvester, and an up-to-date land

leveller, all urgently needed in the interests of efficient use of land and labor.

The main office was equipped with three new desks, and two pieces of invaluable office machinery, an adding machine and mimeograph outfit, which will respectively speed up routine office work and permit additional extension services. Meteorological observation equipment has been supplemented with installation of a wind mileage recorder, still undergoing adjustment. The Station shop is better equipped for general machine and other maintenance work through the addition of numerous hand and power tools.

During the year, negotiations were carried on between the Town of Brooks and the Board of the Eastern Irrigation District respecting the transfer of old Station property sub-divided for residential and school purposes.

Crops, Acreage Distribution and Labour—Land in seed crop production in 1954 comprised 65 acres of barley, 48 acres of oats, 2 acres of which was greenfeed, 20 acres of canning peas, 10 acres of corn, 10 acres of potatoes, 5 acres of beans, 3 acres of rye and 1 acre of wheat. Alfalfa occupied a total of 26 acres, and tame pasture 45 acres.

One hundred and thirty-five acres was garden land. Of this tree stocks occupied 65 acres at the Old Station and 64 acres at the new Station, an increase of 10 acres over 1953. Vegetable test plots utilized 6 acres, and 2 acres were left idle, making a total of 370 irrigable acres under supervision.

Total expenditure for labour increased approximately 12% over 1953, while total number of man work-days increased 31½%, resulting in a 1% decrease in labor cost per man day relative to 1953.

Extension

During the past year, staff from the Station assisted at 24 meetings of various groups and spent 10 days judging at Horticultural Shows. Four large groups used the Station premises for short courses and meetings.

Farmstead planning meetings, including a general instruction meeting and personal appointment meetings with individual farmers, were held in the new irrigation districts. These proved very helpful to the individual and increased the number of farmstead plans that the staff could normally handle. A three-day landscaping short course was held in Brooks with the co-operation of the Brooks School Board. In addition to the above, landscape plans were prepared for 15 other locations. Correspondence at the Station continues to increase, particularly in respect to the tree planting program. There was an increase of 12% in the number of letters answered by the stenographical staff.

Climatic and Growing Season Summary

Winter weather followed a normal pattern with respect to temperature and precipitation with the exception of January which was a cold month with an extreme minimum temperature of —46° F. and a mean temperature of —5.3° F., some 15° below the normal. This severe period caused winter killing of most raspberry varieties and no crop resulted in 1954 as a direct con-

sequence. The last killing spring frost (29° F.) occurred May 7th and the first killing fall frost on September 20th giving a growing season of 135 days. May and June were cool months, followed by a relatively hot July and August, the latter month being abnormally wet with 4.26 inches of rain recorded. September was rather wet and harvesting was seriously hindered until October when fine weather permitted the completion of most fall operations. Heavy nightly frosts, varying from 25° F. down to 15° F. between October 1st and October 5th resulted in severe injury to the potato crop on the Station and in the Brooks area generally. Subsequently fine weather prevailed up to the last week of December. Strong drying south-westerly winds were experienced on December 27th and 28th with temperatures reaching 29° F. In the early hours of December 29th temperatures dropped suddenly to —18° F. This extreme change, after the desiccating conditions of the preceding days will have a marked effect on exposed plant material.

The growing season did not favor warm weather crops, and all vegetable and fruit crops made rather poor growth until the advent of warm weather in July. Cool or damp weather hindered setting of fruits or seed in many garden crops and the sweet corn crop, in particular, was the poorest harvested in many years. Fairly good grain crops were harvested, though wet weather slowed curing of grain in the swath and some weathering occurred. A summary of meteorological conditions for the year appears in the following table.

Month	High Max.	Low Min.	Average Max.	Average Min.	Mean Temp.	Pre- cipitation (Inches)	Hours of Sunshine
January	43	—46	5.64	—16.25	—5.30	1.15	78.2
February	63	—12	39.29	23.36	31.33	0.72	122.4
March	57	—12	28.48	9.58	19.53	1.87	127.3
April	69	—13	37.20	20.20	28.70	0.78	173.6
May	83	16	61.33	38.58	49.95	1.94	262.1
June	86	35	66.20	44.83	55.51	1.85	228.1
July	96	40	80.06	50.42	65.24	1.24	369.9
August	82	39	70.96	50.70	60.83	4.26	252.9
September	78	26	62.60	51.00	51.80	2.77	182.7
October	75	15	56.83	27.32	42.07	0.12	231.4
November	69	15	52.30	25.66	38.98	0.05	129.3
December	62	—18	38.54	15.38	26.96	0.31	135.6

Propagation and Distribution of Trees and Shrubs

The number of applicants for planting material has doubled in the past year. There were 397 applicants in 1953 and 836 in 1954. Although requests doubled, individual orders called for smaller amounts. In the healing-in-beds 115,748 plants were tagged for disposal; 63,148 were shipped along with 52,600 cuttings of poplar and willow.

Seed stratified and stored in the new controlled-storage responded favourably. The use of chemical treatment on a number of hard-to-start seeds was instrumental in obtaining good stands. Dogwoods and Honeysuckle, in particular, showed marked improvement in germination and growth.

The local collection of sufficient amounts of suitable seeds to fill the demand for plants is not possible at present. The loss of the plantings at the old Station has called for the importation of seed. The prairie horticultural stations have contributed to a certain extent but not enough to offset the necessity for obtaining seed from United States firms.

The spring of 1954 was ideal for planting, with cool weather and ample moisture conditions. Seeding of 580 pounds of tree seed

commenced in the lath house on May 5th and in the field on June 2nd. On May 14th transplanting of evergreens was begun.

Hardwood cuttings of poplar and willow were collected in the late fall and early spring. They were in poor condition owing to hail damage the previous summer. This may account for the low percentage of plants. Cuttings of these two species were collected from various farms along with the Station crop. Willow cuttings were obtained from Banff to offset the shortage at the Station.

Apple and plum scion wood, shipped on May 15th, consisted of 29 lots. Six test orchards, 23 farm orchards, and 10 additional lots to enlarge (or replace) established orchards, were shipped beginning May 21st. Fruit tree budwood was sent out on August 30th, amounting to 18 lots.

The large bench in the greenhouse was occupied the past year with soft and hardwood cuttings. Three crops were taken off during the period. Softwood cuttings taken during July produced satisfactory returns and are now ready for winter storage. A good stand of willow cuttings was harvested from this bench in June and transplanted to the field, using the Holland transplanter.

Budding of fruit trees was begun on August 10th. This was two weeks later than usual owing to slow bud development. A total of 10,000 stocks was budded, made up of 5,700 plums, and 4,300 apples and crabapples. Two thousand, one hundred whips are available from last year's budding.

The digging of shipping material was begun on October 20th. The new tree digger proved satisfactory. All plant materials, some 154,390 in number, are heeled in for 1955 shipping.

Trees and Small Fruits

The small fruit testing program now has planted, in replicated plots, 34 raspberry, 14 strawberry, 24 currant and gooseberry varieties. Seed was harvested from 280 raspberry crosses involving combinations of 26 parental varieties. From the seedlings this seed produces it is hoped that varieties better adapted to southern Alberta climatic conditions will be selected.

A new orchard to test the effects of different cultural practices was laid out and partially planted with Dolgo crabapples in the test blocks and apples or crabs, including 25 varieties, as guard rows. The variety orchard planted in 1953 has had added to it 450 grafted apples, including replacements of dead trees. Additional plum, cherry, and apricot varieties were set out and damaged trees replaced. The seedling orchard was increased by 4,570 young trees (all of controlled cross parentage) received from the Morden Experimental Station. By the growing and selection among these seedlings under local environmental conditions it is hoped to get hardy apples and crabapples with more desirable size and quality than those varieties presently available.

Vegetables

Six vegetable kinds, involving 4 varieties of beans, 5 of tomato, one of radish, 4 of corn, one of squash and one of pumpkin, were grown and seed obtained for foundation processing. A number of other samples failed to produce seed due to unfavorable seasonal conditions for warm-weather crops.

Tomato breeding was continued with 78 crosses made in a program to develop an earlier-ripening, dark-fruited variety. Selections were made in material grown from 1952 and 1953 crosses.

Breeding work with evergreen cabbage was continued. Fifteen lines were grown, self-pollinated, and seed harvested for planting in test plots next year.

The 1954 vegetable trials included the following kinds: sweet corn; pop and field corn; tomatoes including those carried in the Prairie Variety Trials tests; Prairie Variety Trials cucumbers; pole, green, broad and wax beans and the many other vegetables included in the recommended varieties listed in the Alberta Horticultural Guide. In all, 508 vegetables were tested and their performance under local conditions recorded.

Potatoes

Cultural and fertilizer tests were continued with Netted Gem potatoes, to evaluate yield and other responses to 8 different treatments, each involving a different combination of fertilizer application and cultural treatment. The effects on yield of using cut and whole seed pieces were investigated, results suggesting that use of whole seed may be a profitable practice.

A large number of potato varieties and numbered seedlings were grown according to the procedure laid down in the National Potato Variety and Seedling tests. Most of the varieties, originally grown in this test, have now been discarded, some because of susceptibility to common scab, others because of lack of vigor and poor yield.

Progress was made with the potato seedling production program. Forty-eight selections were made this year out of some 700 seedlings, the seed of which was greenhouse grown in 1953. A further 5,919 seedlings have been produced this year, and tubers are being harvested from these for field planting and preliminary selection work in 1955.

Seventeen seed potato samples, involving 1,663 tubers, were tuber-indexed for 12 certified seed growers during the late winter months with the supervision and co-operation of the Dominion Plant Pathology Laboratory and the Division of Plant Pathology of the University of Alberta.

Perennials

Peonies, iris, and seedling chrysanthemums which were planted in 1953 came through the winter in excellent condition. The chrysanthemums bloomed in a wide range of colors. Some selection work is contemplated in 1955, to isolate types combining hardiness and earliness with desirable flower characteristics.

Frozen Foods

Vegetables—A total of 73 vegetable samples including 41 new vegetables, were processed for freezer testing. Kinds represented were: wax, green, and broad beans; spinach; turnip and beet tops; swiss chard; kale; carrots; broccoli; corn; squash and vegetable marrow. The emphasis was on green beans, corn, carrots and broad beans; these kinds accounting for 54 of the samples being compared with standard and presently recommended varieties.

Fruits—Gooseberries were the only fruit processed, with 4 varieties being placed in freezer storage for evaluation.

Wrapping Materials—This year 63 types of wrappings for frozen meats were placed in freezer storage wrapped on cellulose sponges to which a set amount of water was added. Wraps showing poor characteristics insofar as moisture loss in storage is concerned will be eliminated. Wraps showing good characteristics will then be checked with meat. This method will obviate use of meats in large amounts. A report on types of wraps tested for two years is being completed.

Report of the Board of Trustees of the Surplus Wheat Board Received by The Government of the Province of Alberta from 1916-1919 Canadian Wheat Board

HONOURABLE L. C. HALMRAST, Chairman

Dr. O. S. Longman, Deputy Minister, Department of Agriculture

H. W. Gaebel, Secretary, Department of Agriculture

Richard Ballhorn, Farmer, Wetaskiwin

Arthur Pierson, Vice-President and Treasurer of the Independent
Grain Company, Calgary

Reciepts for the year totalled \$3,145.03 all of which was in payment of interest on investments.

Payments for the year ending December 31, 1954 amounted to \$4,288.99 and were made up as follows:

Scholarships awarded	\$1,725.00
Board Expenses	30.00
Investment in Government of Canada debentures	2,533.99

A statement showing receipts and expenditures is attached, also a statement of assests and liabilities.

Investments

During the year 1954 the Board invested the sum of \$2,500.00 in Government of Canada debentures bearing interest at the rate of 3¾%.

Investments as shown on the attached balance sheet consist of:

(1) Province of New Brunswick	3½ % debentures	\$45,000.00
(2) Province of British Columbia	3 % debentures	45,000.00
(3) City of Calgary	3½ % debentures	4,000.00
(4) Government of Canada	3¾ % debentures	2,500.00
		\$96,500.00

Meetings

A meeting of the members of the Board was held on August 27th, 1954 and scholarships totalling \$2,475.00 were made available as per the approved list which was in effect during the year 1953.

General

Scholarships totalling 320 in number and valued at \$26,166.36 have been awarded and paid since the Board instituted the policy of providing scholarships.

The Board has continued the policy of conserving the principal remaining in the Trust Fund, making all expenditures from the income received from investments.

LIST OF SCHOLARSHIP WINNERS NAMED DURING 1954**Junior Club Winners**

Donald Thomas, Indus	Ella Carruthers, Fort McLeod
Victor Grose, Clive	Ilene MacDonald, Mannville
Otto Itterman, Warburg	Victoria Lopushinsky, Starr
W. Rimer, Warburg	Beverley Van Schaik, Wembley
R. Loughheed, Red Deer	Kenneth Evans, High Prairie
Graham Gall, Acme	Edwin Walisser, Manning
George Gow, Vermilion	Gordon Gilkyson, La Glace
Harry Pederson, St. Albert	Patricia Carty, Beaverlodge
Myrna Bucknell, Haynes	Nina Cuira, Eaglesham

University of Alberta Young People's Week Winners

David Jorgenson, Blackie	V. Joanne Bartelon, Strathmore
--------------------------	--------------------------------

Women's Institute Girls' Club Winner

Not awarded

To University of Alberta from Agricultural School Winners

Kay Green, Meeting Creek	Walter Gerdt, Bluffton
Blanche Ross, Forestburg	

Winners of Open Scholarships for any young person to attend a School of Agriculture

Evelyn A. Fringer, DeWinton	Douglas R. Wilson, Dewberry
John P. C. Rock, Drumheller	Bernard Plante, St. Paul
Pierretta T. Noel, St. Lina	Huibert Reijne, Brightview
John D. Thomson, Tofield	Earl C. Briggs, South Edmonton

**Schedule of Scholarships approved at the Meeting of the Board
Held on Friday, August 27th, 1954**

From Clubs to School of Agriculture at each Club Week		
2 crops, 2 livestock, 2 home economics	18 @ \$ 75.00	\$1,350.00
From Schools to University at each School		
1 in Agriculture or Home Economics	3 @ \$100.00	\$ 300.00
To any young person attending School of Agriculture		
	8 @ \$ 75.00	\$ 600.00
To School of Agriculture from Young People's Farm		
Week at University. 1 boy and 1 girl	2 @ \$ 75.00	\$ 150.00
To School of Agriculture from Women's Institute		
Girls' Club Week at Olds	1 @ \$ 75.00	\$ 75.00
		\$2,475.00

ANNUAL REPORT, 1954

173

TREASURY DEPARTMENT
WHEAT BOARD MONIES TRUST FUND
Balance Sheet as at December 31, 1954

ASSETS		Par Value	Book Value
Investments			
Government of Canada 3¾ % due January 15, 1978		\$ 2,500.00	\$ 2,524.40
Province of British Columbia 3 % due December 15, 1969		45,000.00	44,653.86
Province of New Brunswick 3½ % due April 1, 1967		45,000.00	44,834.58
City of Calgary 3½ % due July 1, 1968		4,000.00	3,992.60
			<u>\$ 96,005.44</u>
Cash in Bank	\$5,182.07		
Less: Outstanding cheques	225.00		4,957.07
Accrued Interest			573.63
			<u>\$101,536.14</u>
LIABILITIES			
Trust Fund December 31, 1953			\$100,073.75
Add. Surplus for Year 1954			1,462.39
			<u>\$101,536.14</u>

TREASURY DEPARTMENT
WHEAT BOARD MONIES TRUST

Statement of Receipts and Payments for the Year Ended December 31, 1954

Bank Balance December 31, 1953		\$ 6,101.03
Interest on \$2,500 Government of Canada Debentures	\$ 46.87	
Interest on \$45,000 Prov. of British Columbia Debentures	1,350.00	
Interest on \$45,000 Prov. of New Brunswick Debentures	1,575.00	
Interest on \$4,000 City of Calgary Debentures	140.00	
Interest on Bank Balances	33.16	
		<u>3,145.03</u>
		\$ 9,246.06
Deduct Payments:		
University of Alberta Scholarships	\$ 300.00	
Olds School and Farm	450.00	
Vermilion School and Farm	675.00	
Fairview School and Farm	300.00	
Richard Ballhorn—meeting expense	10.00	
Arthur Pierson—meeting expense	20.00	
Investment: \$2,500 Government of Canada 3¾ % debentures due Jan. 15, 1978 @ 101	2,525.00	
Accrued Interest Purchased	8.99	
		<u>4,288.99</u>
Balance December 31, 1954		<u>\$ 4,957.07</u>

TREASURY DEPARTMENT
WHEAT BOARD MONIES TRUST FUND
Accrued Interest as at December 31, 1954

Government of Canada Debentures:		
\$2,500.00, 3¾ %, January 15, 1978, 5½ months		\$ 42.97
Province of British Columbia Debentures:		
\$45,000.00, 3 %, December 15, 1968, ½ month		56.25
Province of New Brunswick Debentures:		
\$45,000.00, 3½ %, April 1, 1967, 3 months		393.75
City of Calgary Debentures:		
\$4,000.00, 3½ %, July 1, 1968, 6 months		70.00
Bank Balance:		
November 1954, \$5,482.07	\$ 3.38	
December 1954, \$5,182.07	3.30	
		<u>6.68</u>
		\$ 569.65
Add: Accum. of Discount:		
Accrued on Province of British Columbia	\$.96	
Accrued on Province of New Brunswick	3.31	
Accrued on City of Calgary	.26	
		<u>\$ 4.53</u>
Less: Amor. of Premium:		
Accrued on Government of Canada	.55	
		<u>\$ 3.98</u>
Net Earnings accrued to December 31, 1954		<u>\$ 573.63</u>

S 135 A33 1954
ALBERTA DEPT OF AGRICULTURE
ANNUAL REPORT OF THE
DEPARTMENT OF AGRICULTURE OF
SERIAL M1 39747548 SCI



Date Due

[illegible]

S 135 A33 1954

Alberta. Dept. of Agriculture.

Annual report of the

Department of Agriculture of

39747548 SCI

101

